

410
450

elna



ELNA SEWING MACHINE

Record in space provided below the Serial No.
and Model No. of this appliance.

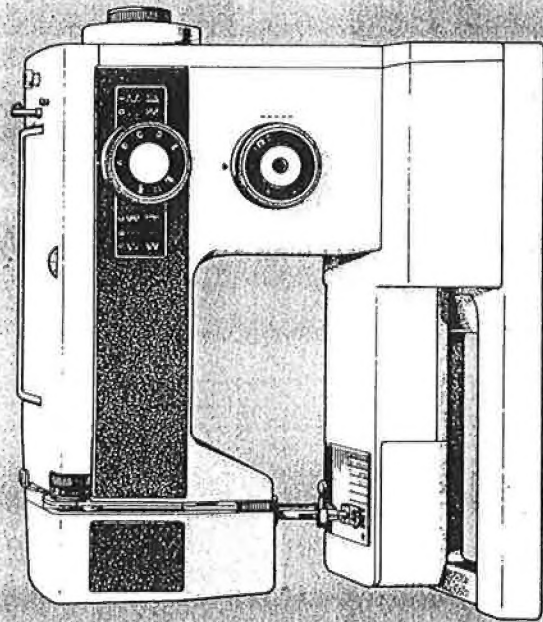
The Serial No. is located Rear of arm.

The Model No. is located Rear of arm.

Serial No. _____

Model No. _____

Retain these numbers for future reference.



Instruction Manual

Your new Sewing Machine The Instruction Manual

enables you to become acquainted with your machine, to familiarize yourself with its operation, manipulation and certain basic seams. This is the first part of this booklet.

The Sewing Guide

forms the second part. Without claiming to be exhaustive, it gives you nevertheless a good idea of the wide range of possibilities for practical and decorative sewing offered by your machine and its standard equipment or with an additional accessory.

Part I

	Pages
Description and main parts	1 to 5
Preparation of the machine	6 to 11
Adjustments and sewing	12 to 32

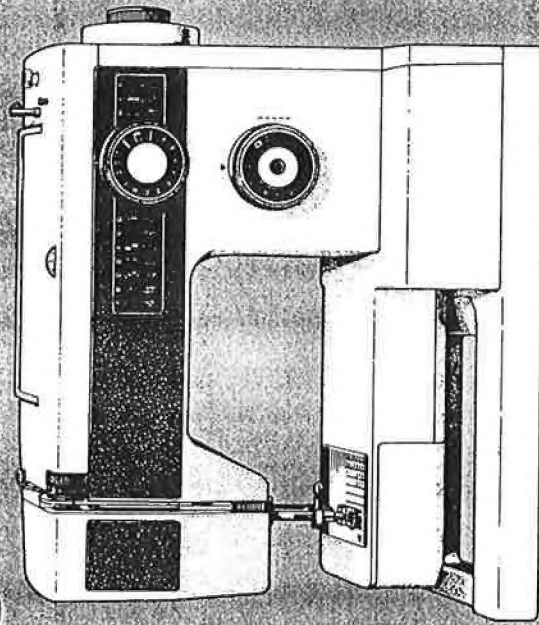
Part II

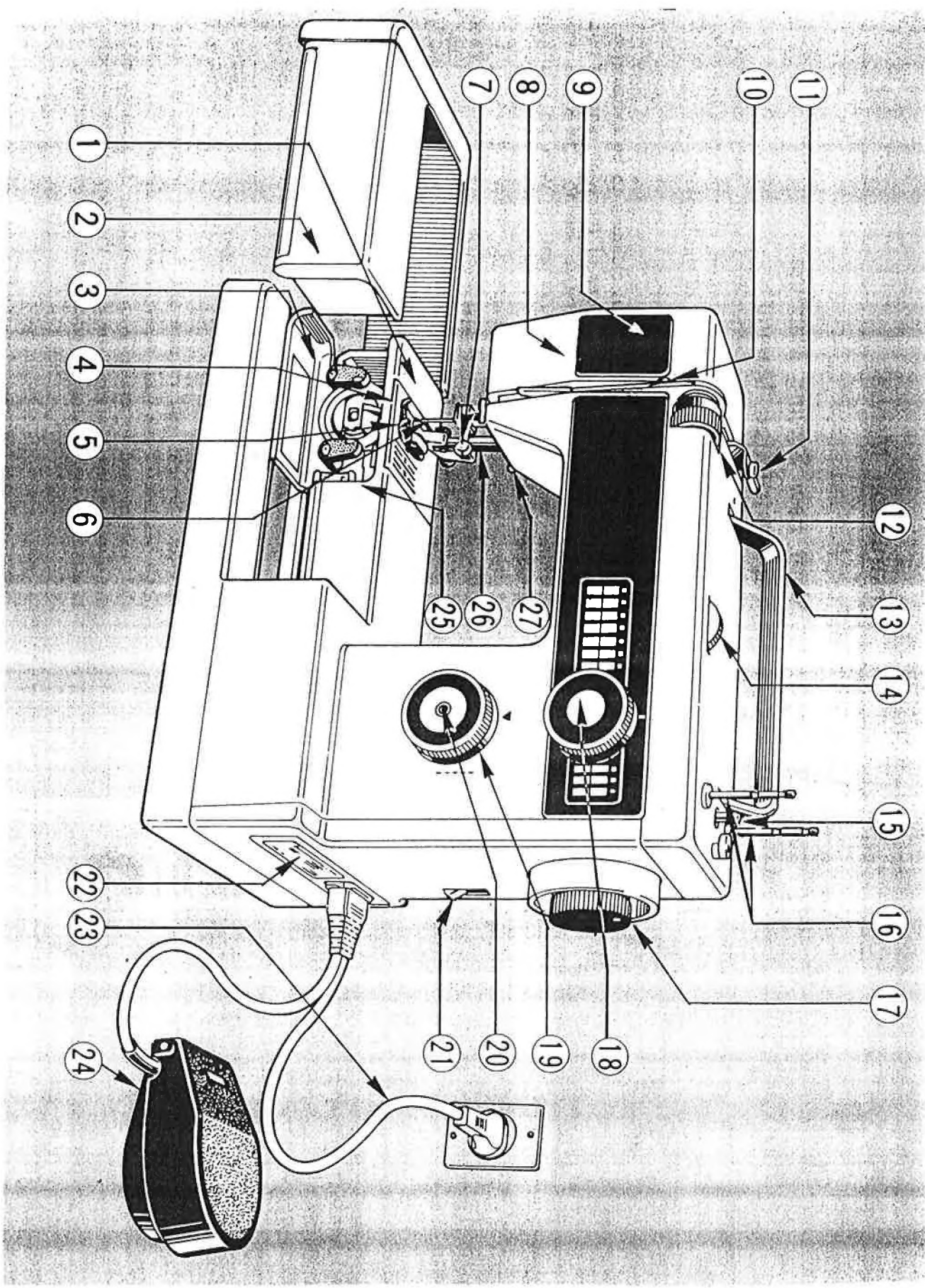
Sewing Guide

and use of the various automatic stitches	33 to 59
Extra accessories	60 to 62
Maintenance	63
To remedy minor disorders	64 to 65
Alphabetical index	66 to 67

Service: Should you require any further information, please don't hesitate to ask your sewing machine dealer. His qualified staff will be glad to answer your questions. In accordance with the terms of the guarantee, he is also the only person authorized to attend to any mechanical adjustments on your machine.

These machines correspond to the EEC regulations 76/889.





Main Parts

- 1 Free arm.
- 2 Sewing table/Accessory case.
- 3 Shuttle race cover.
- 4 Needle plate.
- 5 All-purpose foot.
- 6 Needle.
- 7 Needle clamp screw.
- 8 Built-in sewing light. Input 15 watts maximum.
- 9 Built-in foot pressure control.
- 10 Thread take-up lever.
- 11 Top thread guide.
- 12 Universal upper thread tension.
- 13 Carrying handle.
- 14 Stitch width wheel.
- 15 Bobbin winder
- 16 Retractable spool pins.
- 17 Flywheel, with coupling knob.
- 18 Stitch selector.
- 19 Stitch length dial.
- 20 Instant reverse button.

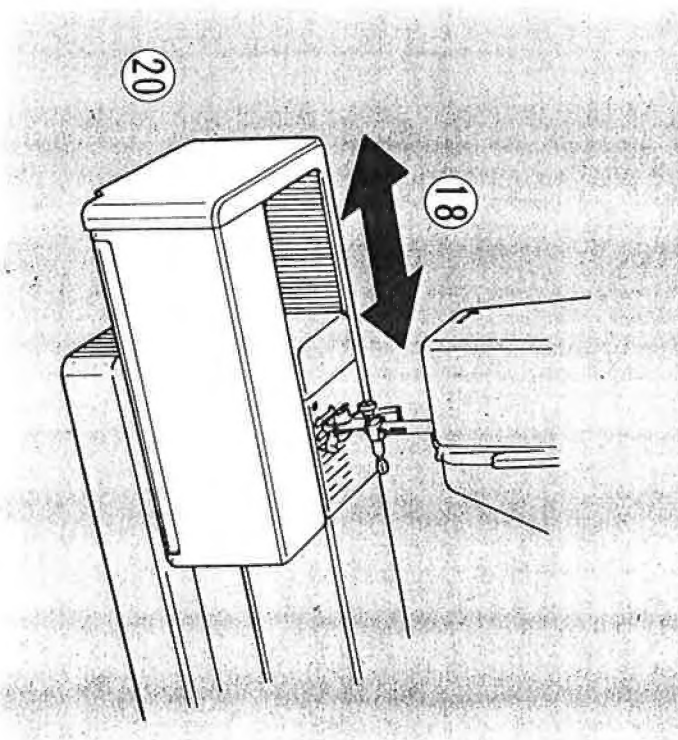
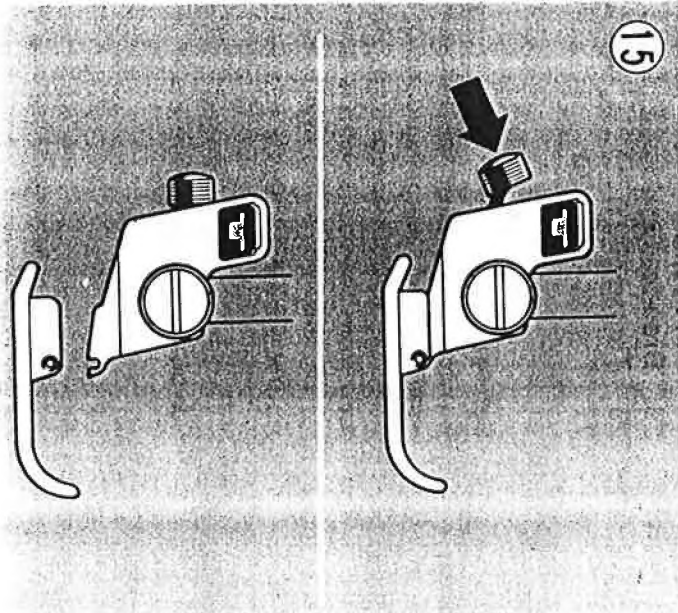
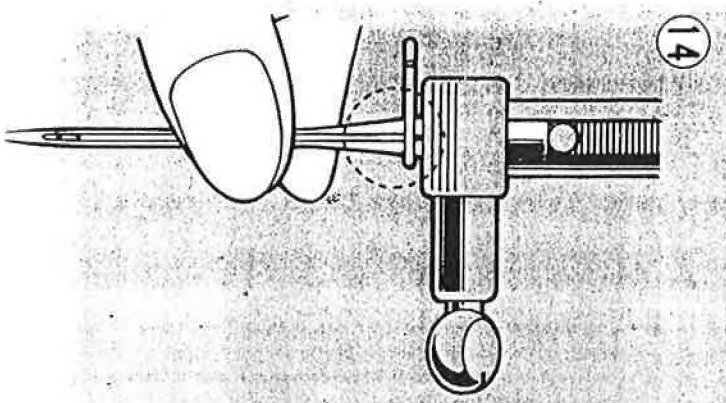
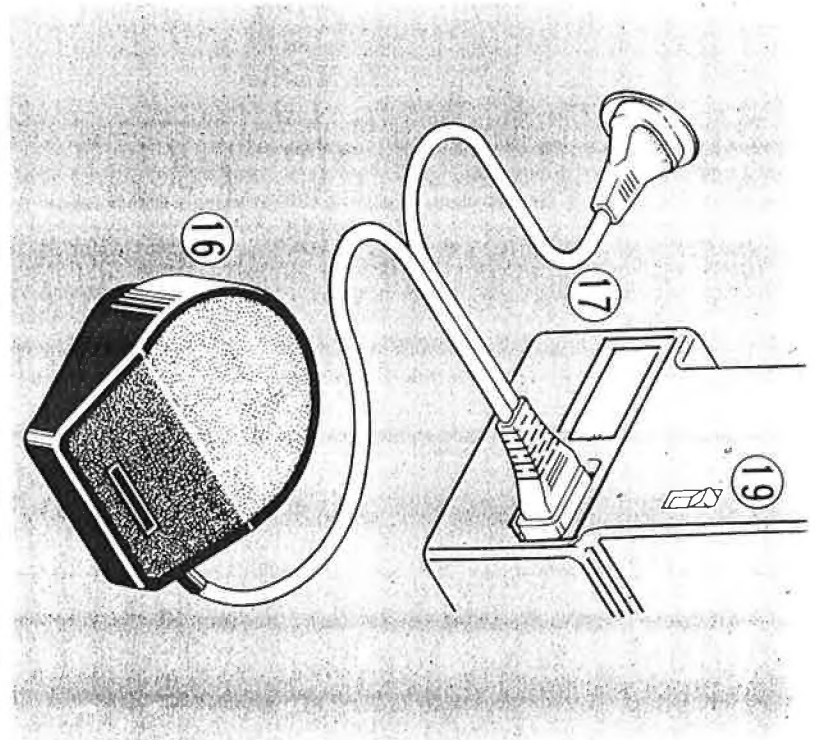
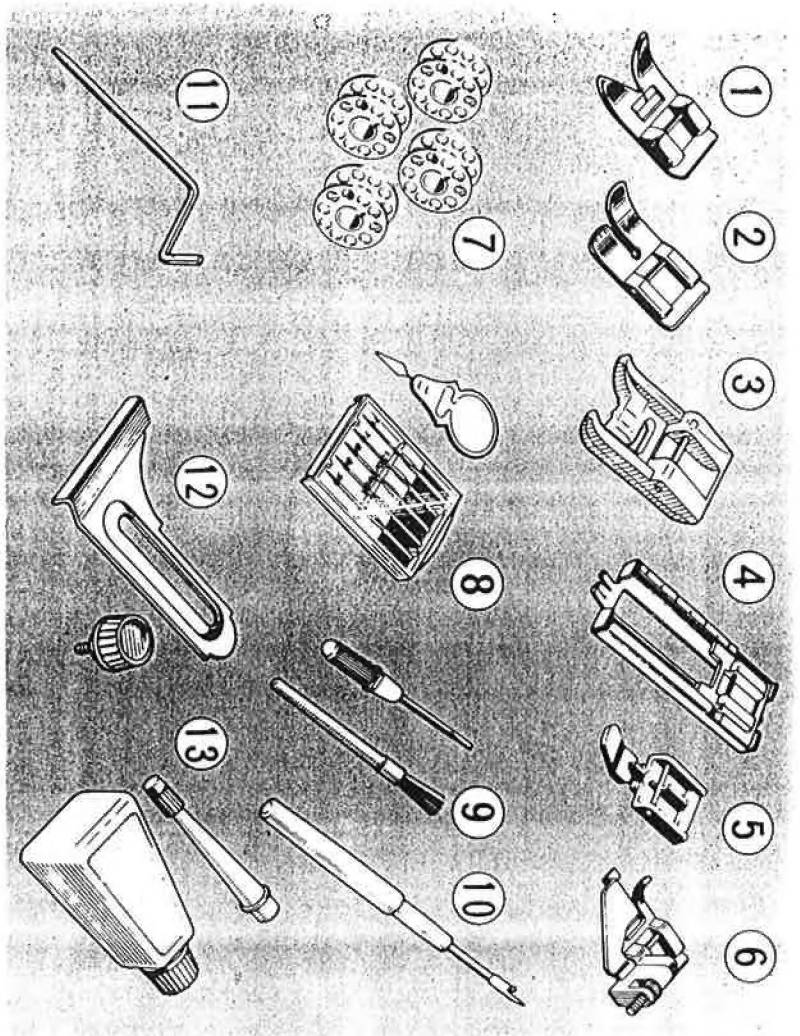
- 21 Main switch.
- 22 Specification plate. Make sure that the voltage (volts) is the same as that indicated on the light bulbs in your home.
- 23 Mains lead.
- 24 Foot control. Specifications depend on country.
- 25 Drop-feed button.
- 26 Thread cutter.
- 27 Presser foot lever.

Safety:

In accordance with the recommendations of specialized safety, standards and electrical control authorities, the sewing machine must be disconnected from the main supply by removing the plug from the socket-outlet whenever:

- the machine is left unattended
- the machine is being serviced
- mechanical parts are changed
- accessories are changed

See also page 63.



Accessories

are kept in the accessory case, in a compartment in the front of the sewing table.

- 1 All-purpose foot (already in place on the machine)

- 2 Straight stitch foot

- 3 Embroidery foot

- 4 Buttonhole foot

- 5 Zipper foot

- 6 Blind hem foot

- 7 4 Bobbins (plus one already in the shuttle hook)

- 8 Assortment of needles and a needle threader

- 9 Small screwdriver

- 10 Buttonhole knife and seam ripper

- 11 Quilting guide

- 12 Cloth guide and screw

- 13 Tube of oil

- 14 **Should you have to change the needle**

Hold the needle with its flat part against the index finger and push it as far as it will go into the needle clamp. Tighten the screw firmly. Use needles of the system 130/705 H (15 x 1).

- 15 **Should you have to change the foot**

Raise the presser bar and push the release button at the back of the shank to remove the foot.

Place the other foot under the shank and lower the presser bar to lock the foot on the foot shank automatically.

Operation

- 16 The foot control regulates motor and sewing speeds. The greater the pressure on the control, the higher the speed. Press preferably with the sole of the foot (and not with the toes). Get used to the speeds by running the machine for a few turns (without thread and with the presser foot raised).

- 17 Plug the mains lead into the machine and a wall outlet.

- 18 The sewing light is situated in the head of the machine.

- The input of the light (15 w maximum) is marked on the machine.

- 19 The main switch turns the light on or off, as well as the supply of electric current to the motor. Switch it on to run the machine and off when you are not sewing.

- 20 The sewing table/accessory case can be used as a convenient flat sewing surface by leaving it in place on the machine base. To remove it, just slide it to the left, to reveal the free arm which makes it easy to sew the openings of trousers, the waistbands of skirts, aprons, patches on the seats of trousers, pockets, etc.

If you are using your machine

- 1 For the first time or have not used it for some time, put a drop of oil in the shuttle race, on the point indicated.

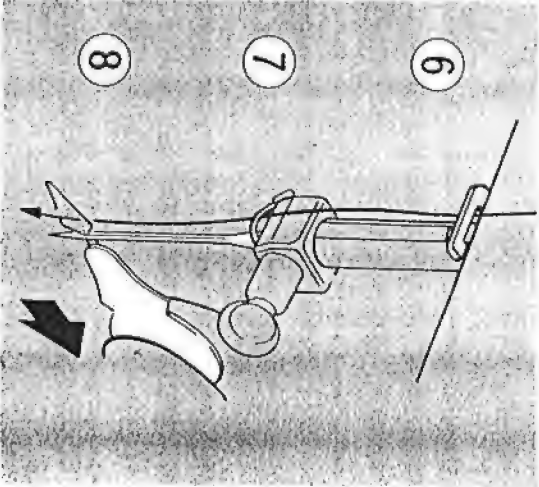
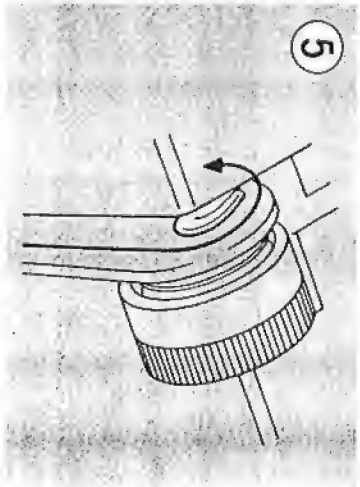
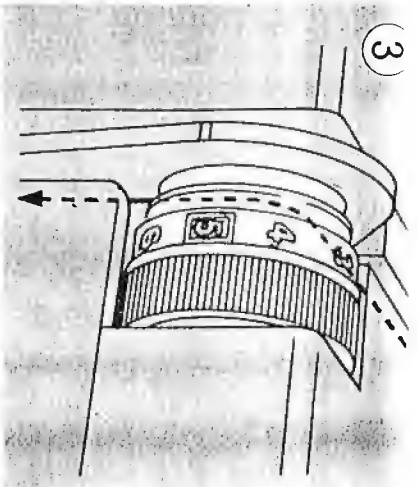
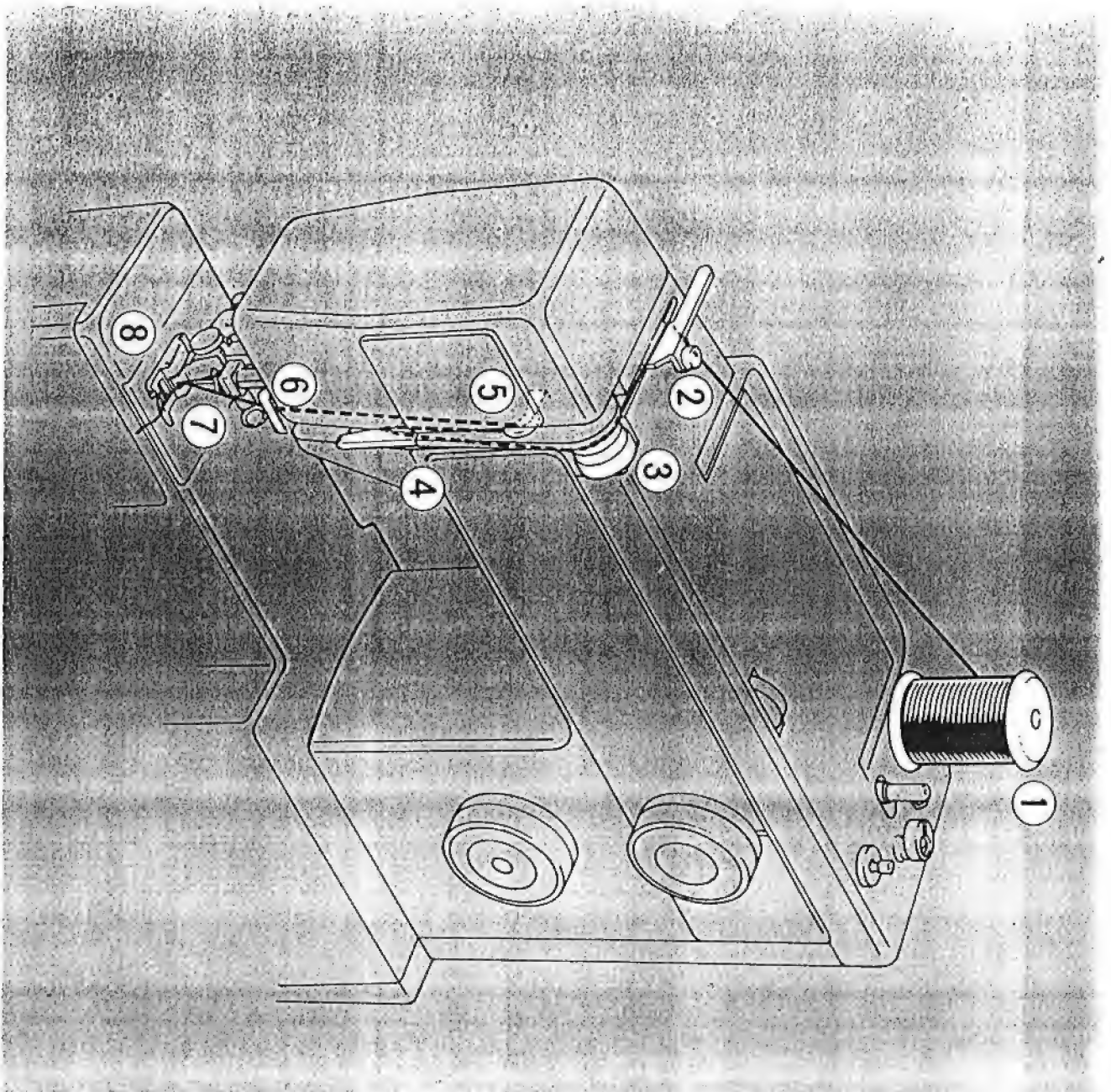
Wind the Bobbin

For the usual sewing jobs, it is best to use a medium sized thread.

- 2 Disengage the flywheel by unscrewing the coupling knob as far as it will go.
- 3 Place the bobbin on the bobbin winder, and push the bobbin winder to the right.
- 4 Pull out one of the spool pins and place the spool of thread on it.
- 5 Pass the thread through the bobbin winder tension discs, as indicated.
- 6 Wind the end of the thread around the bobbin by hand, in the direction indicated.
- 7 Wind the bobbin, at a medium speed by pressing the foot control lightly, pressing lightly with a finger on the spool so as to stretch the thread better and thus fill the bobbin to a maximum. The full bobbin stops automatically.
- 8 **Re-engage** the flywheel by **tightening** the coupling knob.
- 9 Cut the thread and remove the bobbin from the bobbin winder by pushing the latter to the left.

Threading the Bobbin Case and Placing the Bobbin Case in the Shuttle Hook

- 10 Hold the bobbin case between the thumb and index finger of the left hand, so that the slot (A) in the edge of the bobbin case is on top. Take the bobbin between the thumb and index finger of the right hand so that the thread on top leads **from left to right**.
- 11 Insert the bobbin into the bobbin case, pull the thread **into the slot of the bobbin case**.
- 12 **Draw it under the tension spring (B) and into the fork-shaped opening of the spring.**
- 13 Raise the needle bar to its highest position, and swing open the shuttle race cover, downwards.
- 14 Hold the bobbin case latch (C) between the thumb and index finger of the left hand, with about 10 cm (4") of thread running from the top of the bobbin case to the right. Insert and centre the bobbin case on the stud of the shuttle body (D). Make sure that the bobbin case finger (E) is opposite the shuttle race notch (F).
Press the bobbin case (G) into the shuttle as far as possible until the latch catches on the centre post of the shuttle. Then release the bobbin case latch (C).
Press the bobbin case again after the latch has been released to make sure that the bobbin case is locked securely in place. Close the shuttle race cover.



Threading the Upper Thread

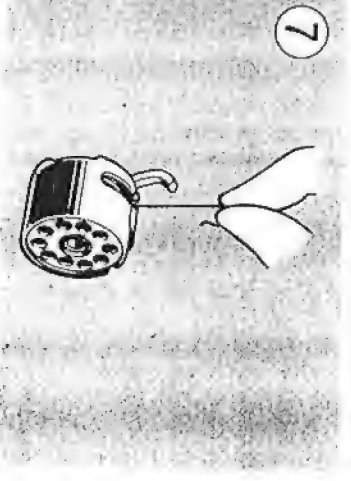
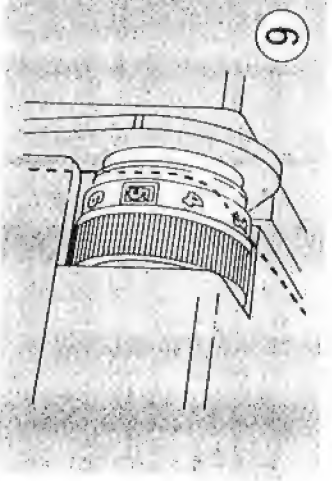
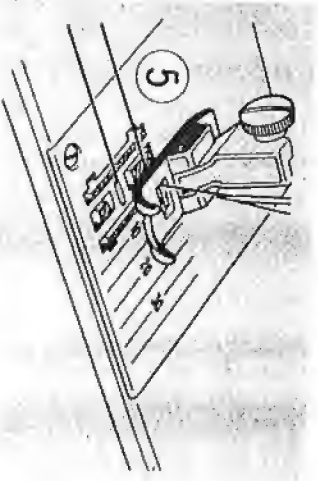
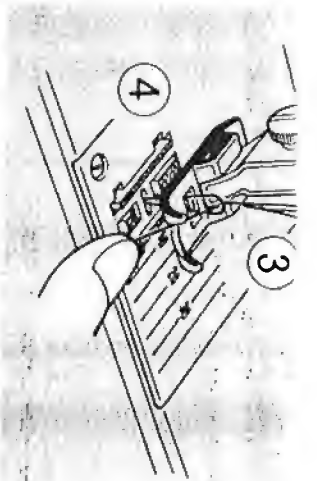
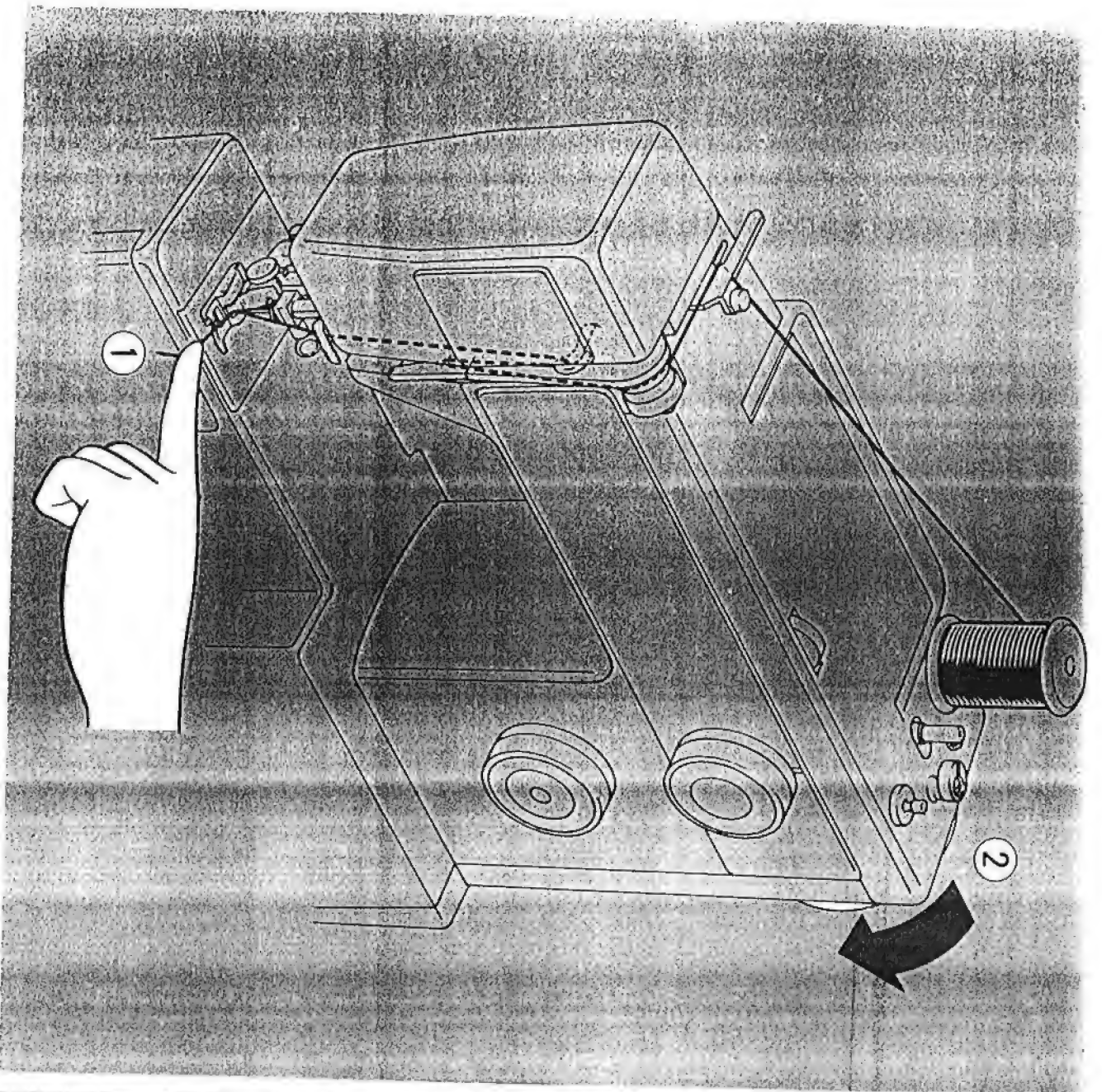
Make sure that the thread take-up lever and the presser foot are in their highest positions.

- 1 Pull out the spool pin and place the spool of thread on it. Hold back the spool with the tip of your finger and pass the thread through in the following order: (all the thread guides are open, including the thread take-up lever)
- 2 Top thread guide.
- 3 Universal upper thread tension, marked between 4½ and 5½.

Important to ensure good sewing results:

Give the thread a sharp tug downwards so that it is properly engaged in the tension device.

- 4 Check spring (from right to left).
- 5 Thread take-up lever — pass the thread through the rear of the notch in cover (from right to left). The thread will slip into the opening of the thread take-up lever.
- 6 Front thread guide.
- 7 Needle clamp.
- 8 Needle. It is threaded **from the front to the back**. (If the needle threader is used, it must therefore be inserted into the eye of the needle from the back.)
- 9 Pull forward about 15 cm (6") of thread to the front.



Drawing up the Lower Thread

- 1 Leave about 15 cm (6") of upper thread in front of the needle and hold it with your index finger against the edge of the needle plate.
- 2 Turn the flywheel one full turn (towards you), by hand.
- 3 This makes the thread take-up lever descend and return to its highest position and will draw up the lower thread.
- 4 Free the loop of thread by hand.
- 5 Leave about 15 cm (6") of each thread to the side, passing them under the presser foot.

You are now ready to start sewing.

Universal Tension

Upper Thread:

- 6 The Universal Tension position is delimited by the frame around the figure 5 and makes it possible to do most sewing jobs without changing the tension of the upper thread.

If, however, an adjustment is required:

Turn the tension knob to between 5 and 9 to increase the tension.

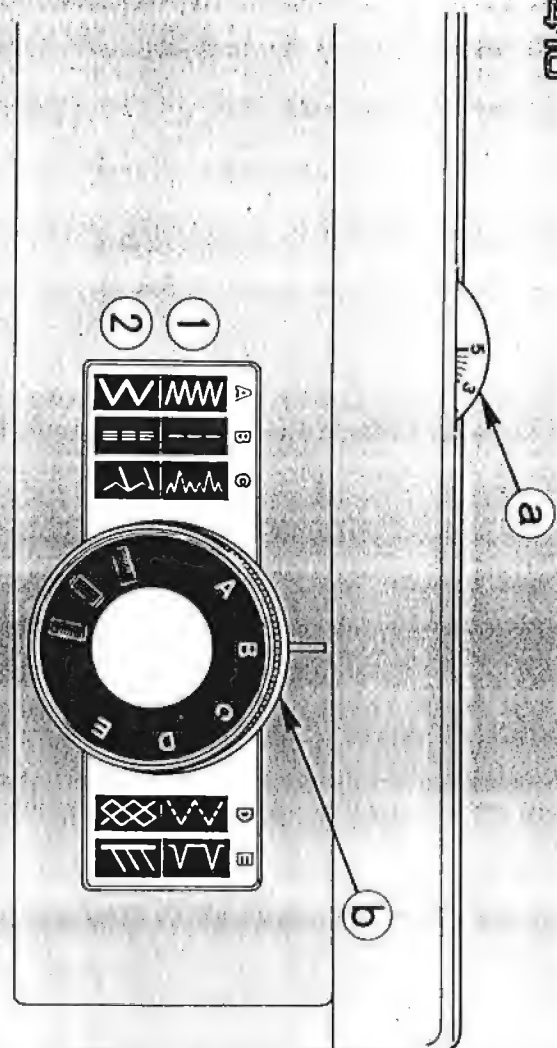
Turn the tension knob to between 5 and 1 to reduce the tension.

Lower Thread:

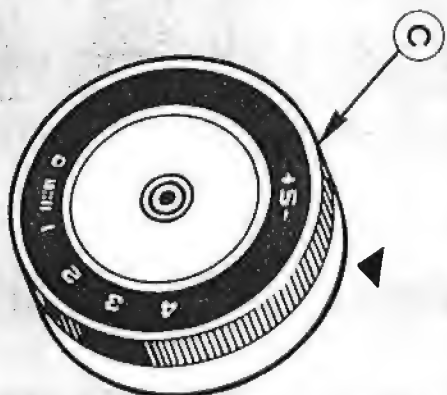
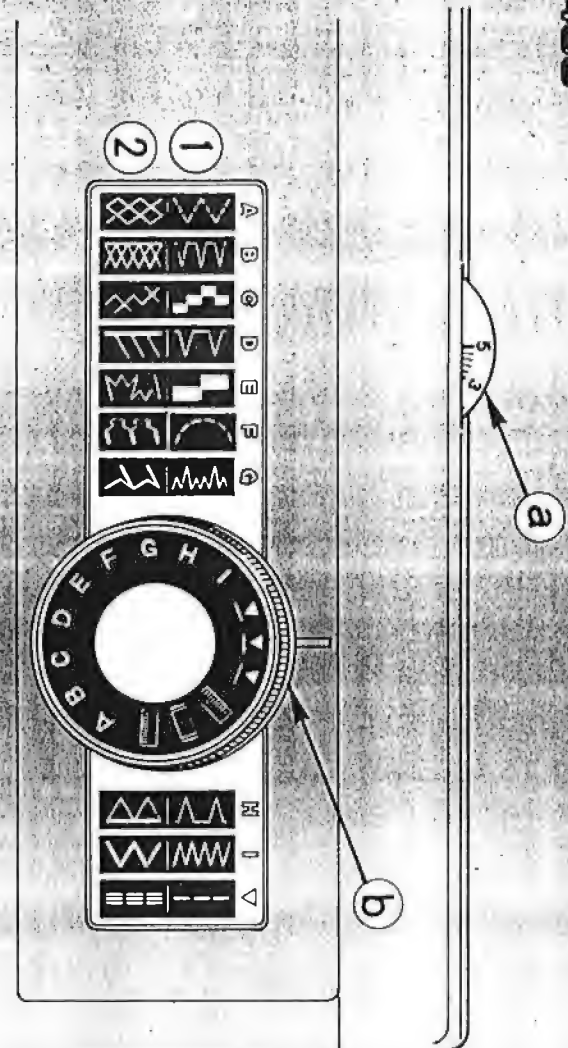
- 7 The lower thread tension is set at the factory and should not be changed unless absolutely necessary. To check the correct lower thread tension, gently lift the filled bobbin in the bobbin case by the thread hanging from it. The tension should be just tight enough to hold its weight. Next, holding the bobbin case, give the thread a sharp tug. The thread should then come out of the bobbin case smoothly, the amount of thread depending on how hard the thread has been tugged.

The Sewing Guide gives more detailed information and advice on tension settings—see part II, page 35.

410



450



Selection and Adjustment of the Stitches

All stitches are set, on principle, with the stitch width wheel (a) turned to the far right (clockwise), though any width between maximum 5 mm and minimum 1.5 mm (for other than the straight stitch) can be selected by changing the position of the stitch width wheel. The various positions on the stitch width wheel correspond to the following widths:

- 1.5 mm at right end (narrowest line) mark 1,5
- 2 mm at yellow line
- 3 mm with the centre line aligned with the guide mark, mark 3
- 5 mm at left end (widest line) mark 5

1 Automatic utility stitches, shown on a green background on the stitch selection chart.

Model 410:

- (A) zigzag sewing
- (B) straight sewing
- (C) elastic blind stitch
- (D) three-step zigzag
- (E) shell edging stitch

Model 450:

- (A) three-step zigzag
- (B) interlock stitch
- (C) checker stitch
- (D) shell edging stitch
- (E) domino stitch
- (F) scallop
- (G) elastic blind stitch
- (H) blind stitch

- (I) zigzag sewing

- (▼) straight sewing (centre, left and right needle positions)

Turn the stitch selector (b) to the corresponding code letter, and the length dial (c) between the buttonhole symbol and 2.

2 Superautomatic stitches, shown on a red background on the stitch selection chart.

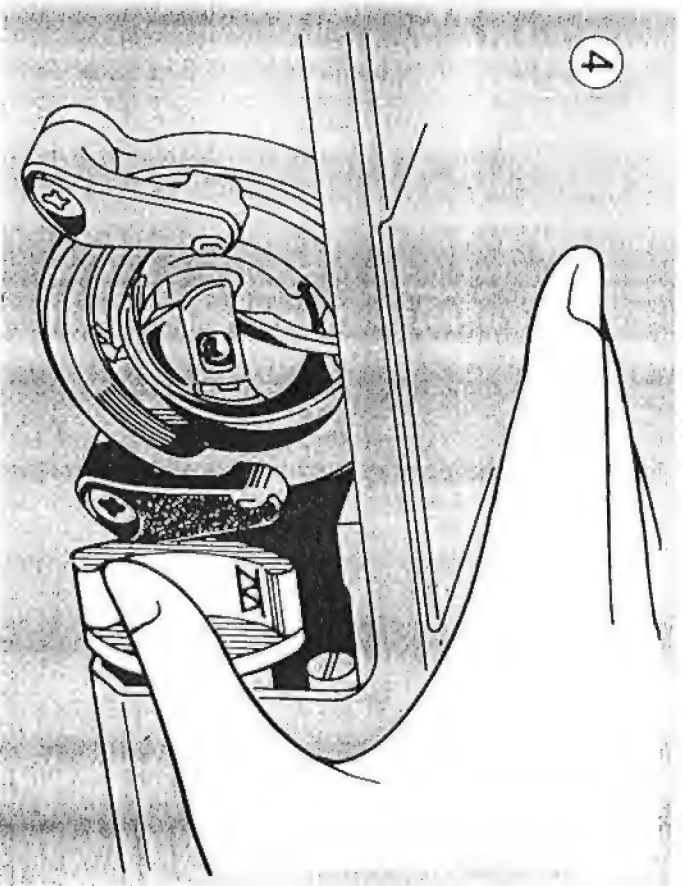
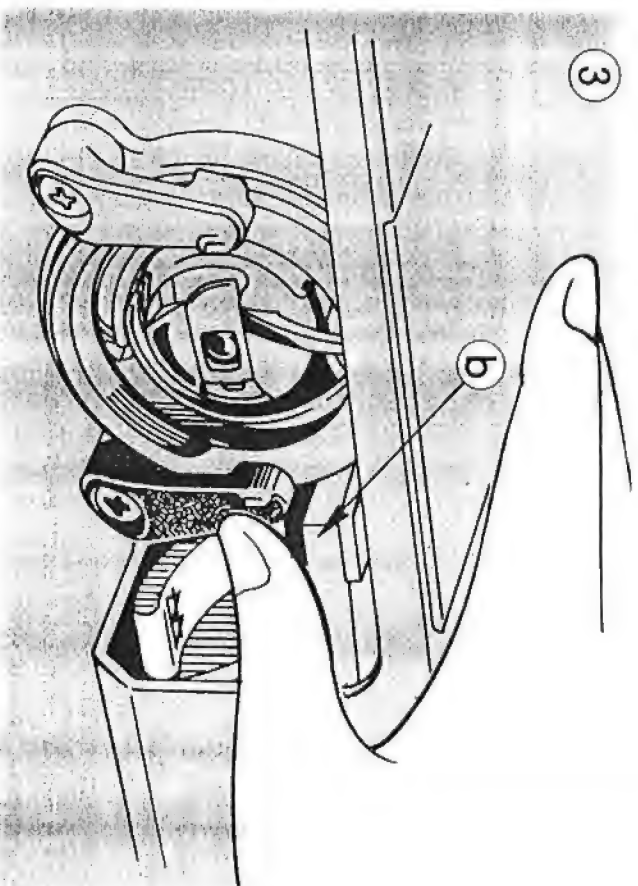
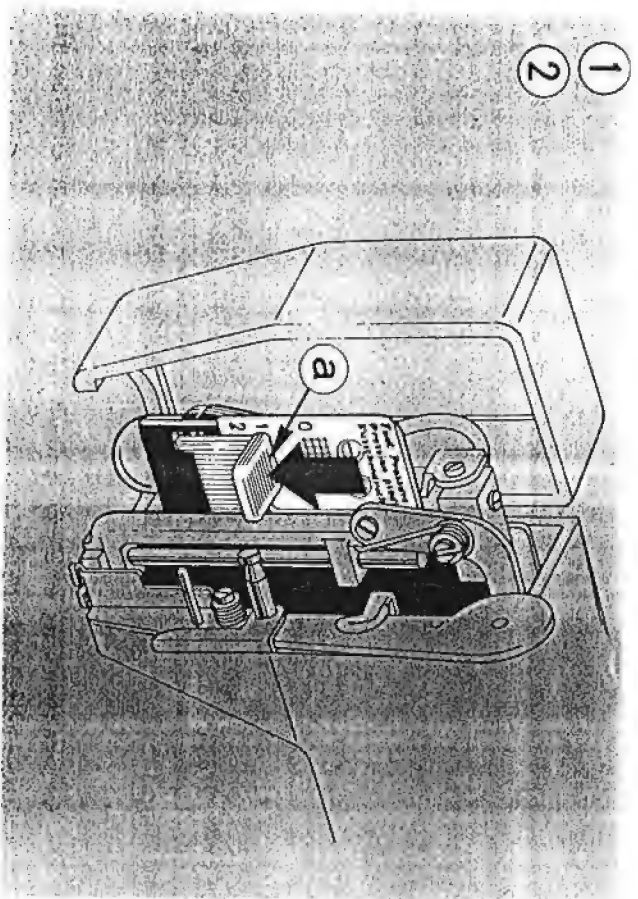
Model 410:

- (A) triple zigzag
- (B) elastic triple seam
- (C) elastic edging stitch
- (D) tricot stitch
- (E) stitch-and-overcast

Model 450:

- (A) tricot stitch
- (B) overlock
- (C) cross stitch
- (D) stitch-and-overcast
- (E) crown stitch
- (F) decorative stitch
- (G) elastic edging stitch
- (H) stretch overlock
- (I) triple zigzag
- (▼) elastic triple seam



Turn the stitch selector (b) to the corresponding code letter and the length dial (c) to "S", marked in red.

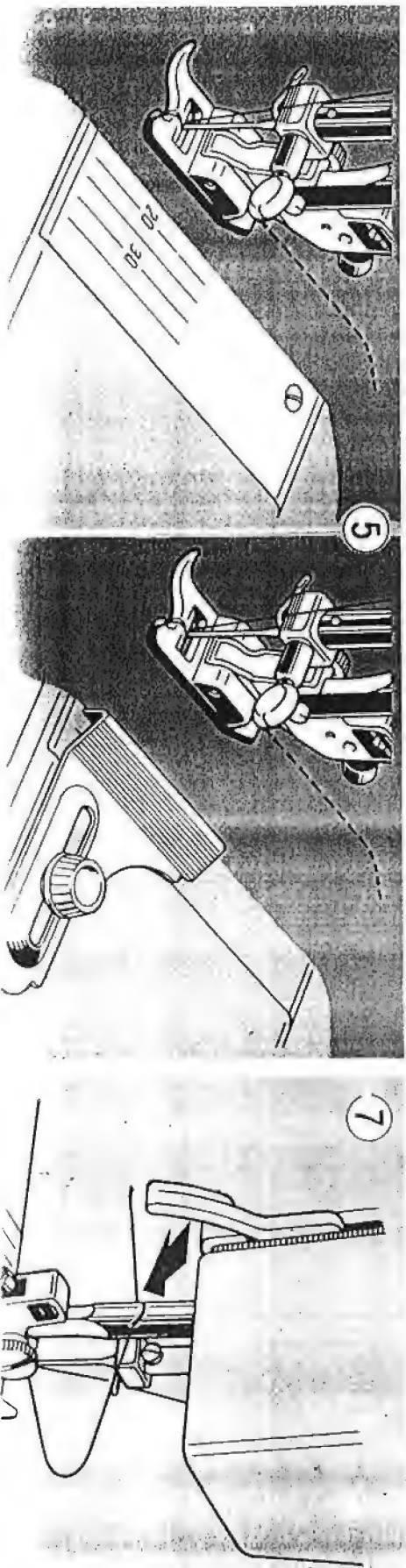
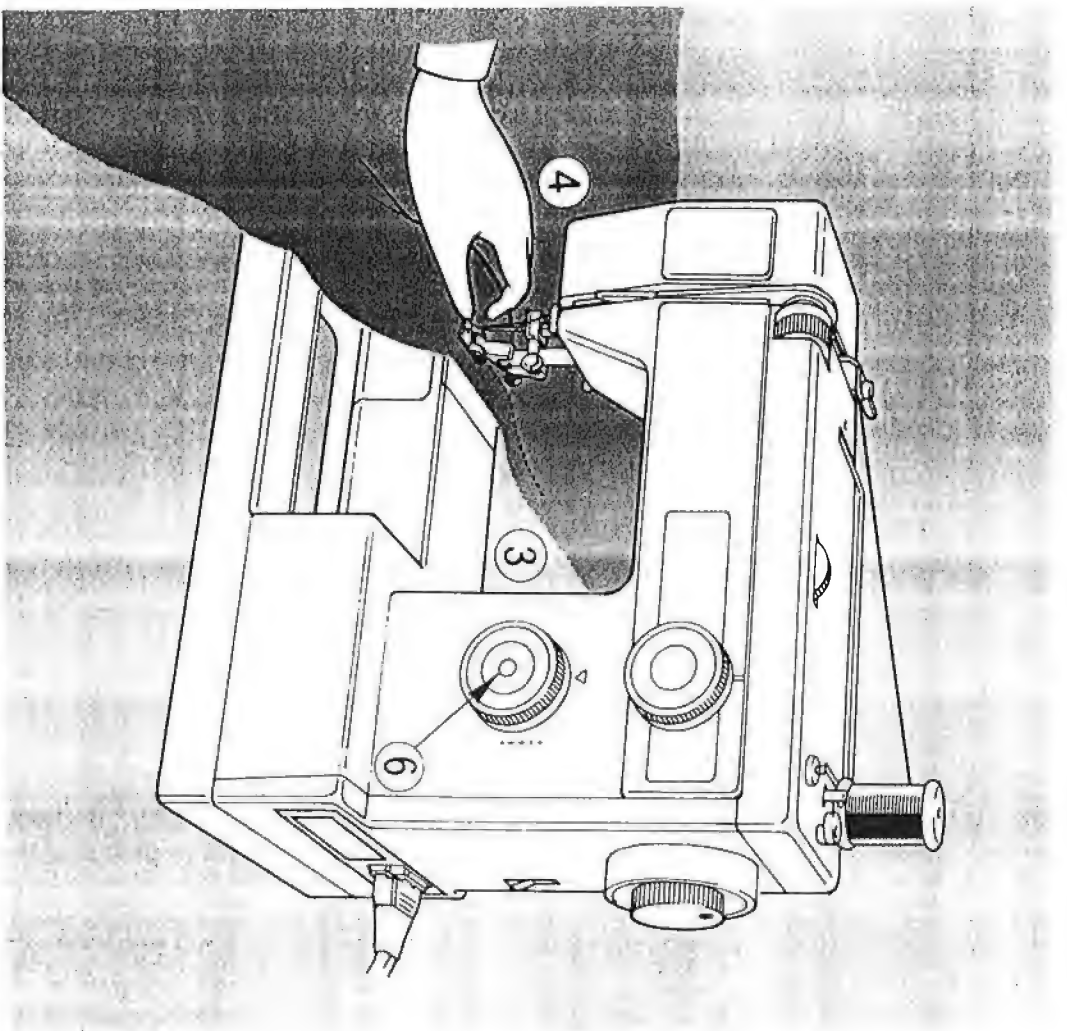


Sewing Foot Pressure Adjustment

- 1 For normal sewing, make sure that the foot pressure control lever (a) is at the "1 normal" position.
- 2 When sewing on very heavy, bulky fabrics, set the pressure control lever at "2 maxi".

Feed Dog Height

- 3 Make sure that the lower end of the drop-feed button (b) marked "  " is pressed in when doing ordinary sewing.
- 4 When sewing on buttons, darning or moving the fabric by hand, push in the upper end of the drop-feed button, marked "  ".



Elementary Sewing

Make sure that the coupling knob has been tightened firmly.

- Use the straight stitch or all-purpose foot. To change the foot, see page 5.
- Always place material under the foot and lower the foot before running a threaded machine.

Straight Sewing forwards

- 1 Set the stitch selector as indicated.
- 2 Set the stitch length dial at between 1 and 2, depending on the length required (up to 2).

To start sewing, lower the needle into the material and hold back the two threads by hand while sewing the first two or three stitches.

- 3 You will then sew a straight seam with stitches 1 to 2 mm long, but you can also sew stitches between 2 and 4 mm long by turning the dial to the corresponding figures — and depending on the work and on the fabric.

To sew

- 4 Guide the material only with your fingers, along the side of the foot, without holding it back (Do not pull the material from the rear). At the same time, carefully observe the seam. You can thus keep an eye on your sewing and avoid the risk of pricking your fingers accidentally.

Keeping the Seam Straight

- 5 To keep the seam straight, use one of the guidelines marked at intervals of 5 mm on the needle plate. The numbers indicate the distances in millimetres from the straight seam at the centre needle position. For even better control of the fabric, it is advisable to fit the cloth guide with the thumb screw on the machine, as illustrated.

Straight Sewing backwards



- 6 For sewing backwards, push the reverse button as far as it will go. This is often used at the beginning and end of a seam, when doing ordinary sewing, to fasten the ends of the seam.

Removing the Work

- 7 To remove the work, first turn the flywheel by hand, towards you, to raise the thread take-up lever to its highest position. This is essential to complete the stitch pattern. It is also important because it ensures that the next seam can be started easily. Raise the presser bar lever (foot). Pull the material out towards the rear and cut the threads with the thread cutter on the presser bar.

Model 450 Only — Changing The Needle Position for Straight Sewing

- 8 With the stitch selector at “”, the straight seam is in the centre (a).

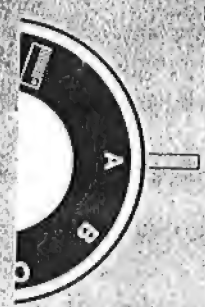
With the stitch selector at “”, the seam is decentred to the right (b), and, with the stitch selector at “”, the seam is decentred to the left (c). The exact distance to the left or right of the centre can be adjusted by turning the stitch width wheel. When the stitch width wheel is turned to the widest position, the seam is at the furthest distance from the centre. This distance is reduced gradually by turning the stitch width to the narrowest position.

N.B. Use the all-purpose foot.

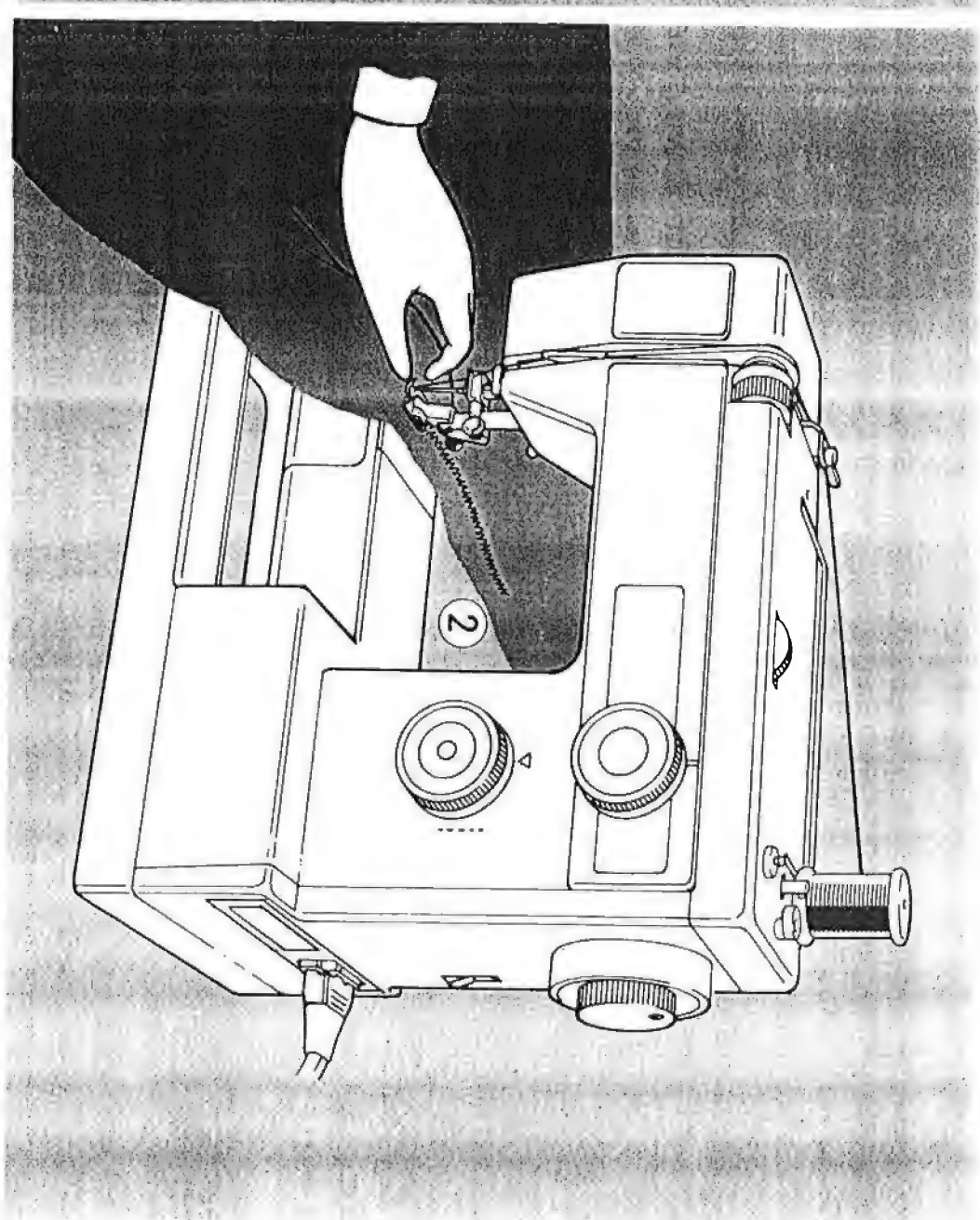
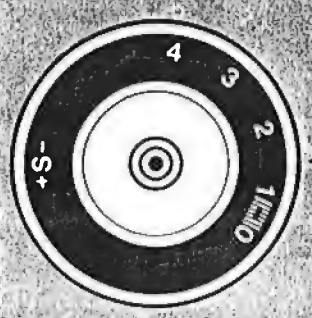
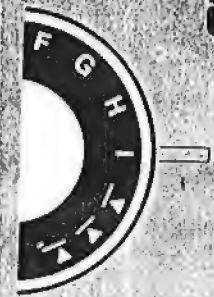
①



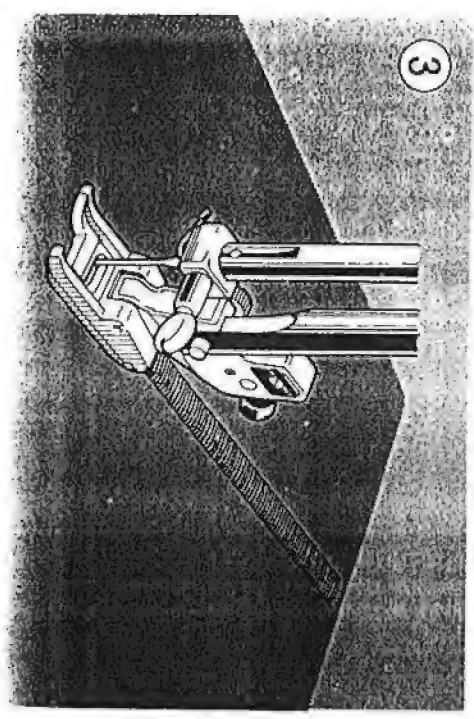
410



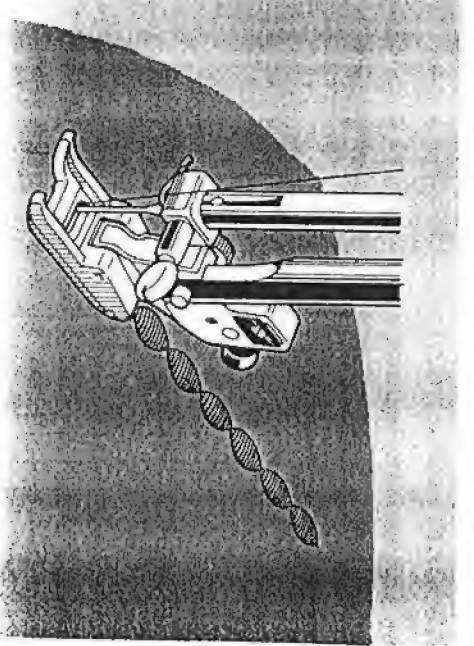
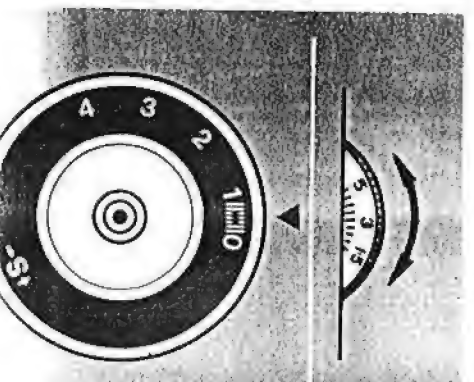
450



③



④



Sewing with the Zigzag Stitch

Use the all-purpose foot.

- 1 Set the selector, stitch length dial and stitch width wheel as indicated.
- 2 You are now ready to sew the zigzag stitch.
You can set the width and length of your zigzag stitch at any position desired within the range of the stitch length dial and stitch width wheel.

This stitch is often used for overcasting, sewing on patches, setting elastic, sewing garments and underwear made of jersey fabrics, blind hems in woollens, etc.

Satin Stitch

Use the embroidery foot.

3. By turning the stitch length dial to the symbol “ ||||| ” or near 0, you will sew a beautiful satin stitch. It's ideal for the hems of sheets, pillow-cases, table-cloths, cushions, etc.

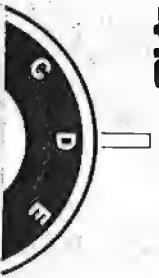
Tapered Satin Stitch

- 4 If you turn the stitch width wheel slowly by hand, to the right and left, while your machine is running fast, you will sew a satin stitch tapered as you fancy.

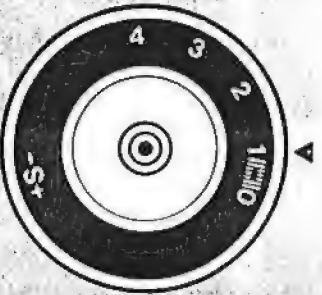
①



410



450



2



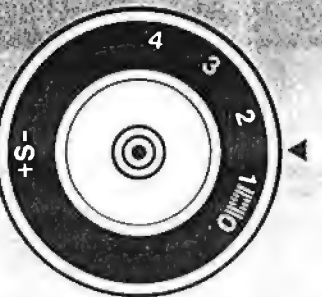
③



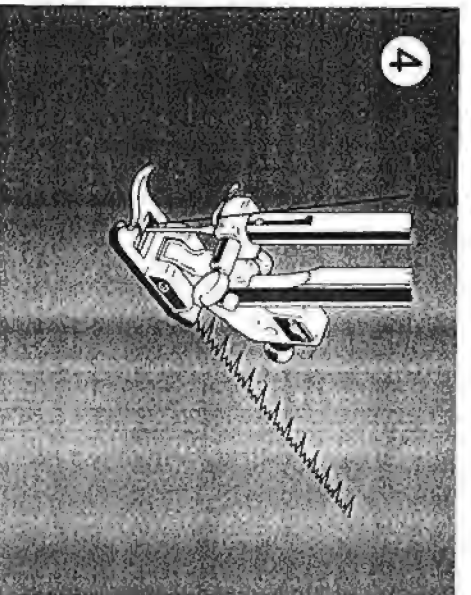
410



450



4



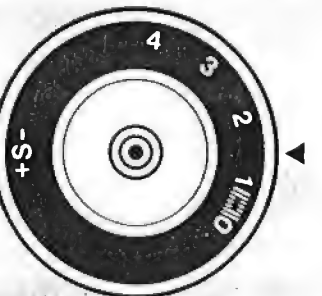
⑤



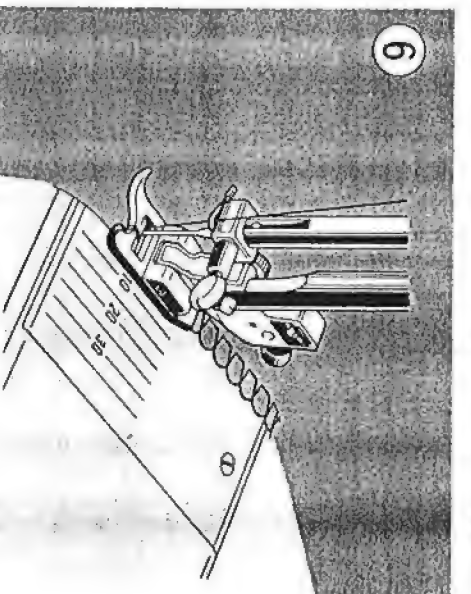
410



450



6



Three-step Zigzag

Use the all-purpose foot.

- 1 Set the selector, stitch length dial and stitch width wheel as indicated.
- 2 You are then ready to sew the three-step zigzag.
- 3 You can set the width and length of your three-step zigzag at any position desired within the range of the stitch length dial and stitch width wheel. This stitch is highly appreciated for its strength and elasticity and is suitable for overcasting, for setting elastics, sewing jersey and stretch fabrics, patching in a single operation, sewing edge-to-edge.

Elastic Blind Stitch

- 3 Set the selector, stitch length dial and stitch width wheel as indicated.
- 4 You are then ready to sew the elastic blind stitch. The length of this stitch can also be reduced to near 0 or the symbol “|||” to produce a fancy satin stitch. Use the embroidery foot.

This stitch has many uses which are described in full detail in the second part of this booklet under the title “Sewing Guide”, viz:

Edging stitch: for edging table-cloths, serviettes, fancy insertions, reinforcing buttonholes.

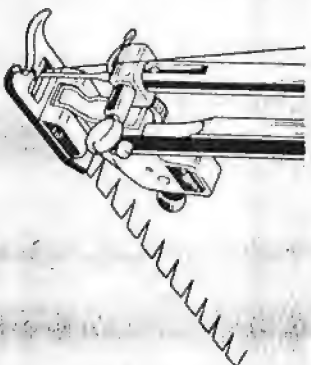
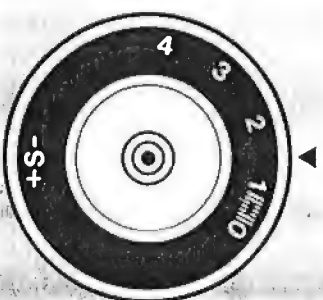
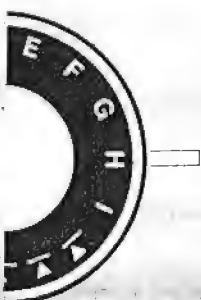
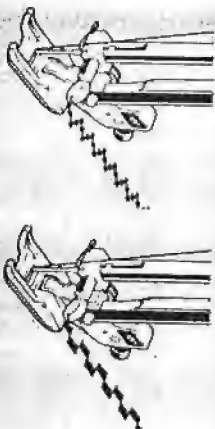
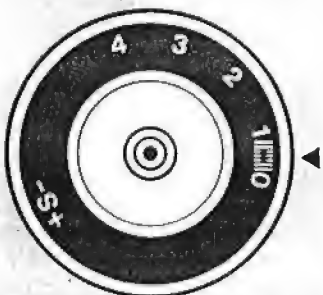
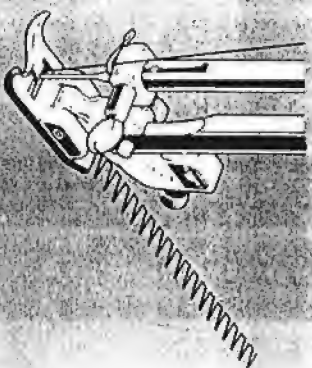
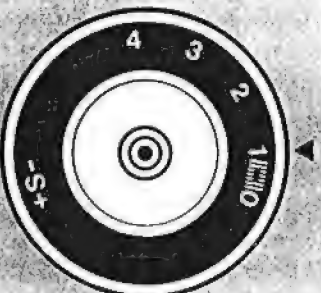
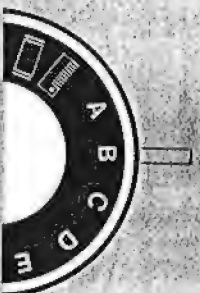
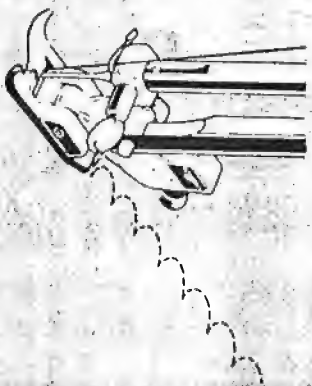
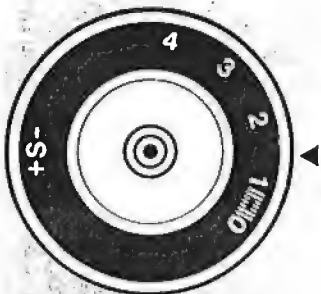
Blind stitch and

Elastic blind stitch: for woollens, stretch fabrics, etc.

Elastic shell hem: for underwear, in jersey fabric, for example.

Shell Edging Stitch

- 5 Set the selector, stitch length dial and stitch width wheel as indicated. Set the upper thread tension slightly tighter than normal.
 - 6 You are then ready to sew shell edging on folded edges of knits or the selvedge of soft, woven fabric. Just sew along the edge of these fabrics so that the straight stitches are sewn in the fabric and the zigzag stitches are sewn just off the edge. The size of “shell” can be varied by changing the stitch length.
- This stitch is a very effective and easy way to make shell tucks for lingerie, pillow-cases, and decorative finishes – sometimes on a single bias tape to be sewn on with the facings around the neckline or armholes.



Model 450 Only — Extra Automatic Stitches

Shown on a green background on the selection chart.

Use the all-purpose or embroidery foot.

Set the selector at the respective codes and the stitch length dial and stitch width wheel as shown.

1 **Scallop Stitch (Code "F")**

This stitch can be used for the hems of soft knits and tricot and for decorative effects. The size of "Scallop" can be varied by changing the stitch width and/or length. See page 41.

2 **Interlock Stitch (Code "B")**

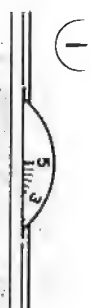
This stitch is suitable for a very fine, delicate seam in knitted nylon or nylon jersey, a very fine lace insertion and a very fine, delicate shell tuck on soft knits. See page 43.

3 **Domino Stitch (Code "E") and Checker Stitch ("C")**

These stitches are very useful for a decorative effect on the edges of both woven and knitted fabrics, sometimes with cord. Set the stitch width at maximum and the length at less than 1.

4 **Blind Stitch (Code "H")**

This stitch provides a durable hem finish that is almost invisible on garments, drapes and curtains. See page 41.



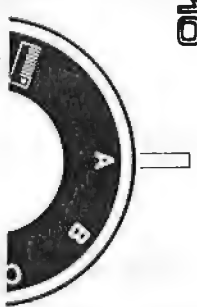
3



410



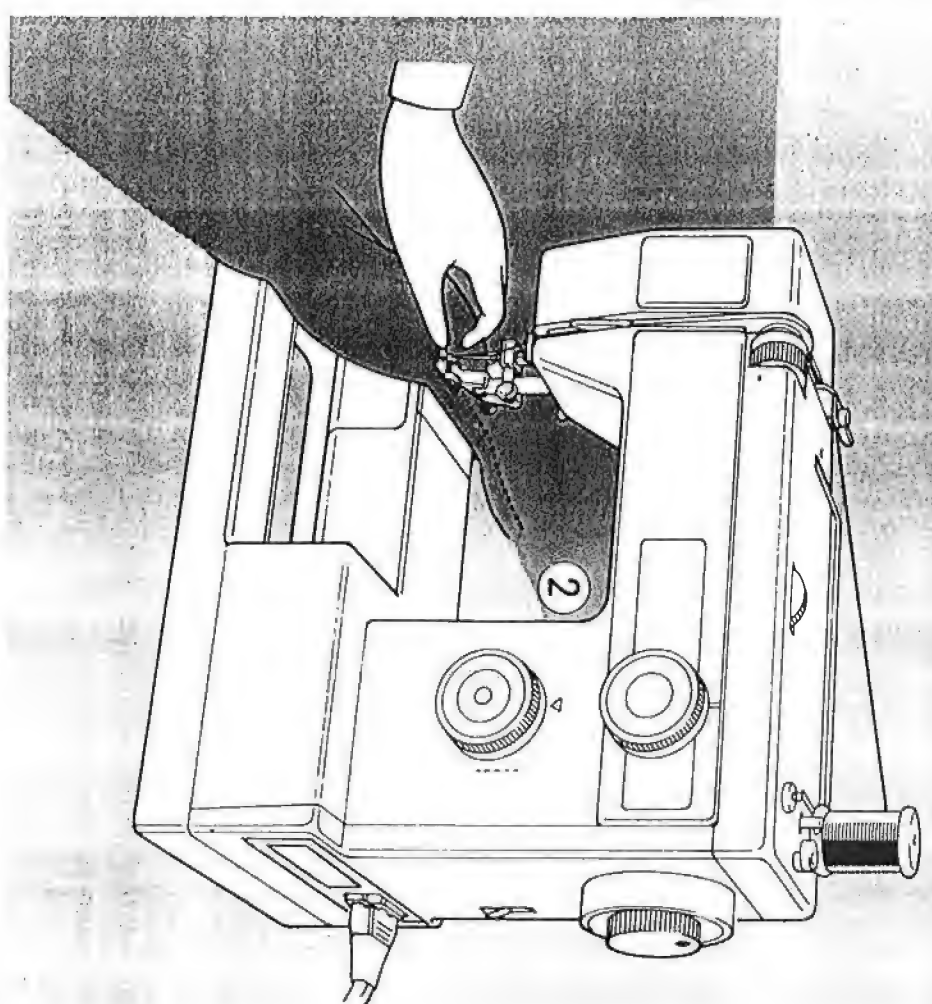
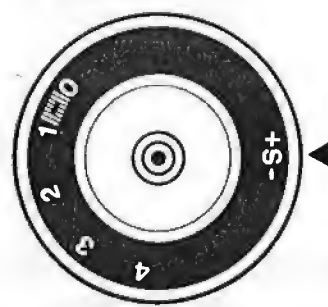
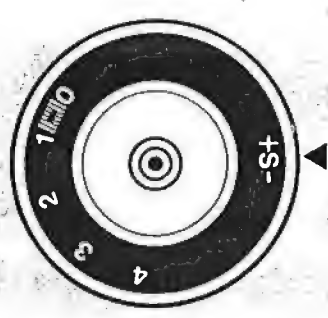
410



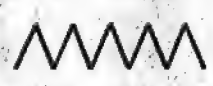
450



450



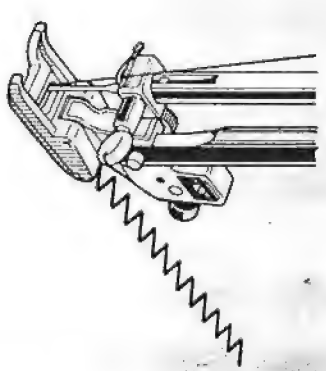
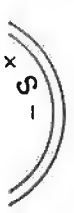
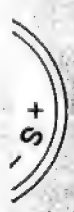
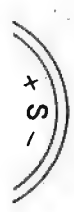
5



6



7



Elastic Triple Seam

Use the straight stitch or all purpose foot.

- 1 Set the stitch selector, stitch length dial and stitch width wheel as indicated.
- 2 You are then ready to sew the very strong elastic triple seam for working and sports garments, garden chairs, curtains, etc.

Triple Zigzag

Use the embroidery foot.

- 3 Set the selector, stitch length dial and stitch width wheel as indicated.
- 4 You are ready to sew the triple zigzag. This zigzag, both useful and attractive, is suitable for reinforcing certain seams in garments and can also be most attractive as a decorative seam on jeans, skirts, etc.

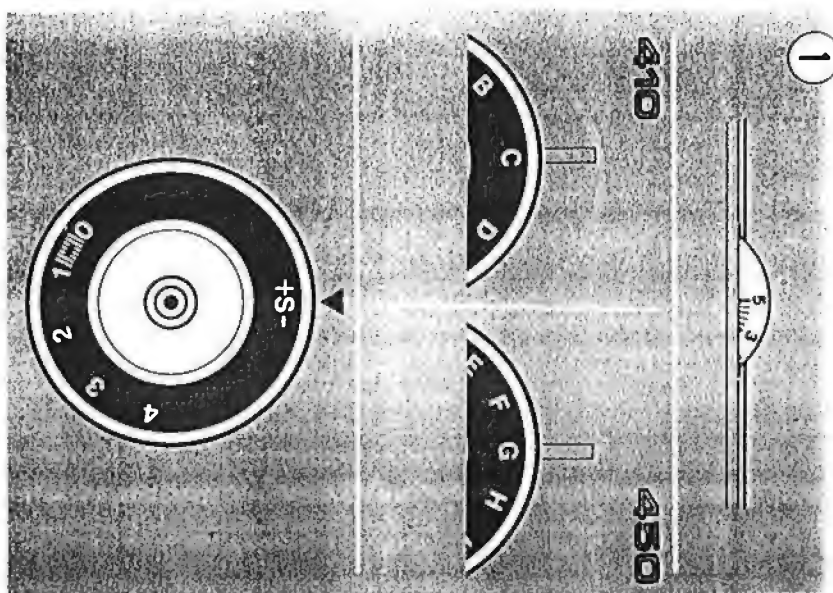
N.B. You can also obtain a narrower stitch by turning the width wheel to the left.

Tuning of Superautomatic Stitches

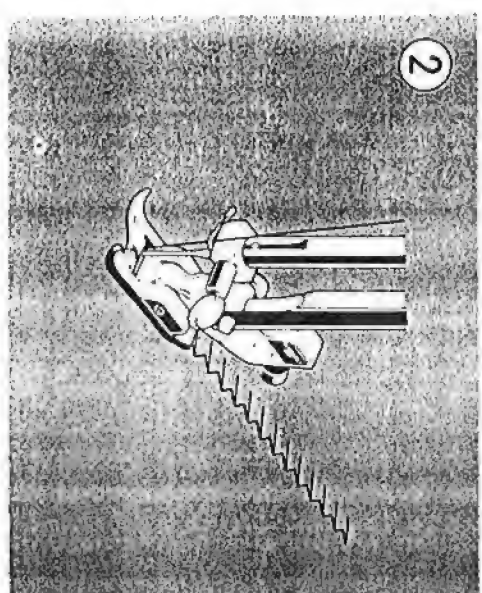
On principle, all the stitches are formed perfectly. However, for certain kinds of fabric, such as very stretchy knits, very slippery silk, satin, etc., it may be advisable to lengthen or shorten the pattern to adapt it better to the material and thread used.

5. With the stitch length dial at "S", the stitch length should normally be correct.
6. If the stitch is too short at "S", turn the dial to "+".
7. If the stitch is too long at "S", turn the dial to "-".

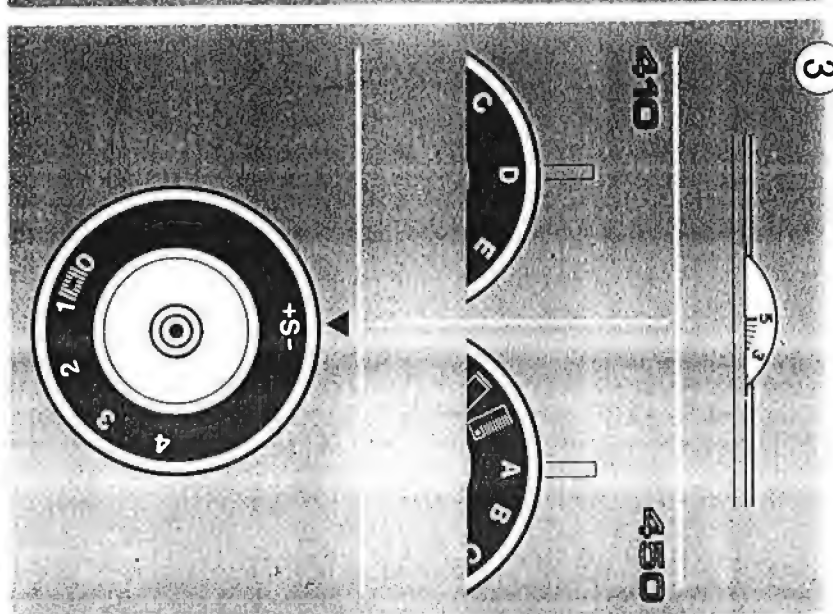
1



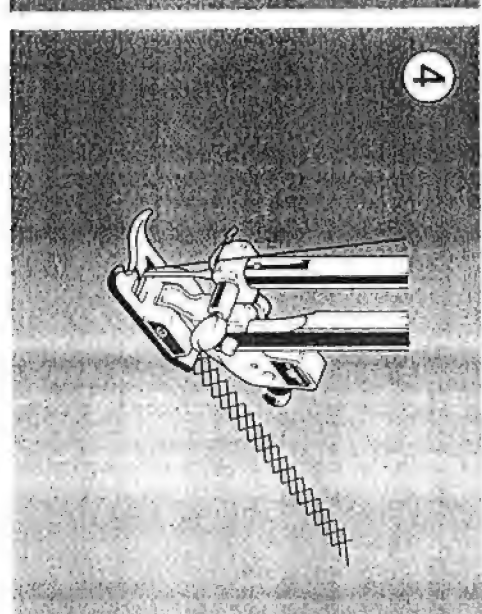
2



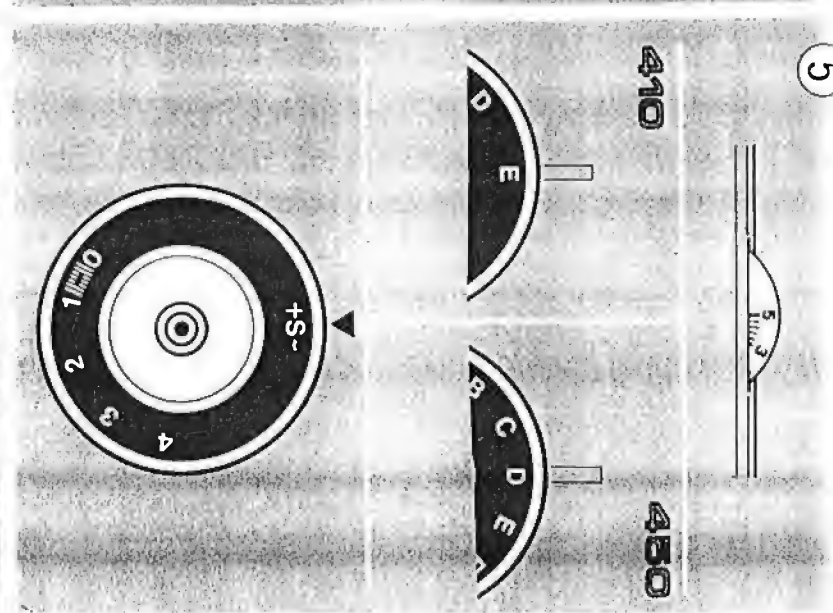
3



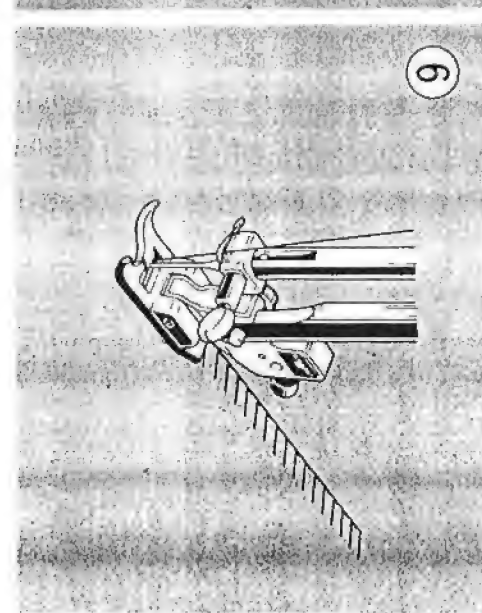
4



5



6



Elastic Edging Stitch

Use the all-purpose or embroidery foot, depending on the material.

- 1 Set the selector, stitch length dial and stitch width wheel as indicated.
- 2 You are then ready to sew the elastic edging stitch, which is an ideal and very pretty stitch for the edges of sleeves, for edging table-cloths and place-mats, etc.
Used as a decorative stitch, it can also be combined with other stitches.

Tricot Stitch

- 3 Set the selector, stitch length dial and stitch width wheel as indicated.

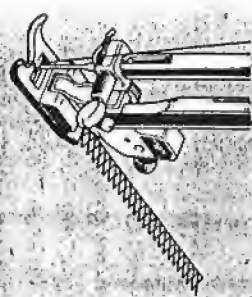
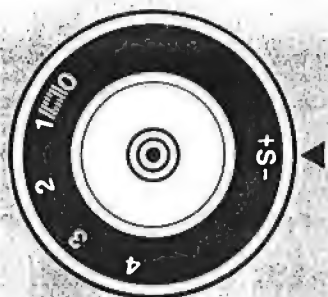
- 4 You can now sew the tricot stitch. This stitch makes it possible to sew and overcast, in one operation, stretch fabrics, in particular jerseys, knitted fabrics, etc. Furthermore, this stitch pattern is attractive and decorative.

Stitch-and-Overcast

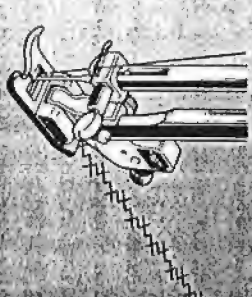
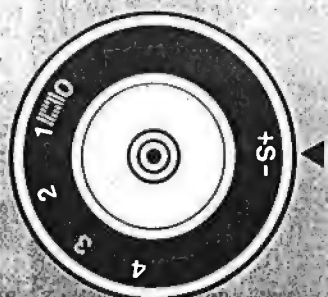
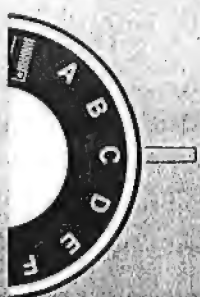
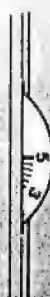
- 5 Set the selector, stitch length dial and stitch width wheel as indicated.
- 6 You can now sew the stitch-and-overcast. This stitch is excellent for giving a seam a neater, more professional finish, or overcasting in one operation, eliminating bulky seams and preventing curling, on the edge of stretch fabrics such as sweater knits, bathing suit knits, and cotton knits.

These stitches and their various uses are described in greater detail in the second part of this booklet, under the heading "Sewing Guide".

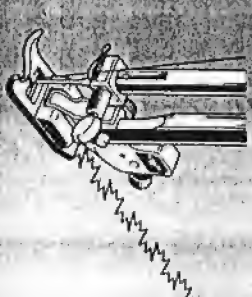
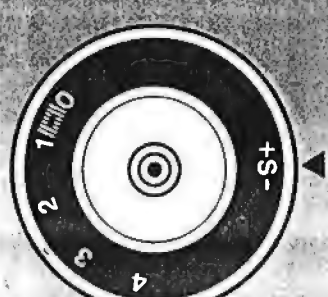
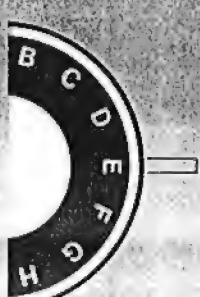
1



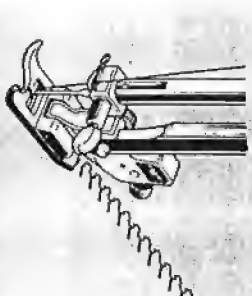
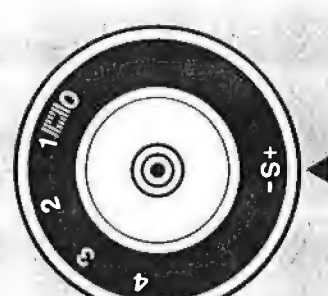
2



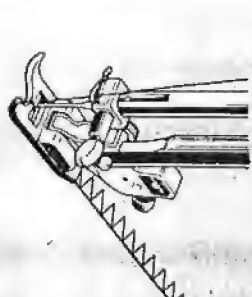
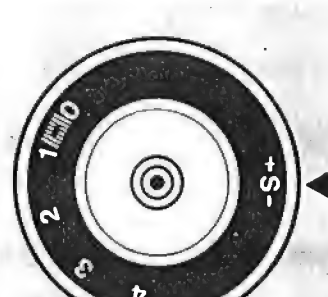
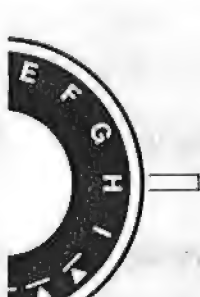
3



4



5



Model 450 Only — Extra Superautomatic Stitches

Use the all-purpose or embroidery foot, depending on the materials.

Set the selector at the respective codes, the width wheel at the widest position and the length dial at "S".

1 Overlock stitch (Code "B")

This stitch is excellent for both knits and woven fabrics and can make finished 5 mm elastic seams of great strength to prevent both curling and unravelling. See pages 42–43, 48–49.

2 Cross Stitch (Code "C")

This stitch produces a replica of the hand-embroidered cross stitch for highlighting drapes and household linens. See page 52.

3 Crown Stitch (Code "E")

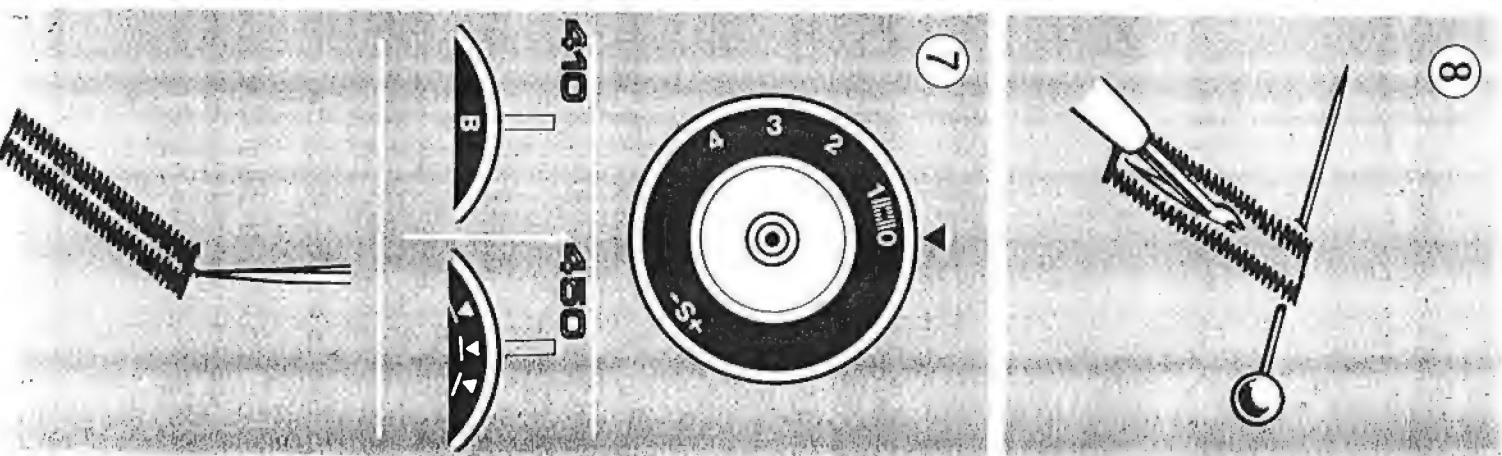
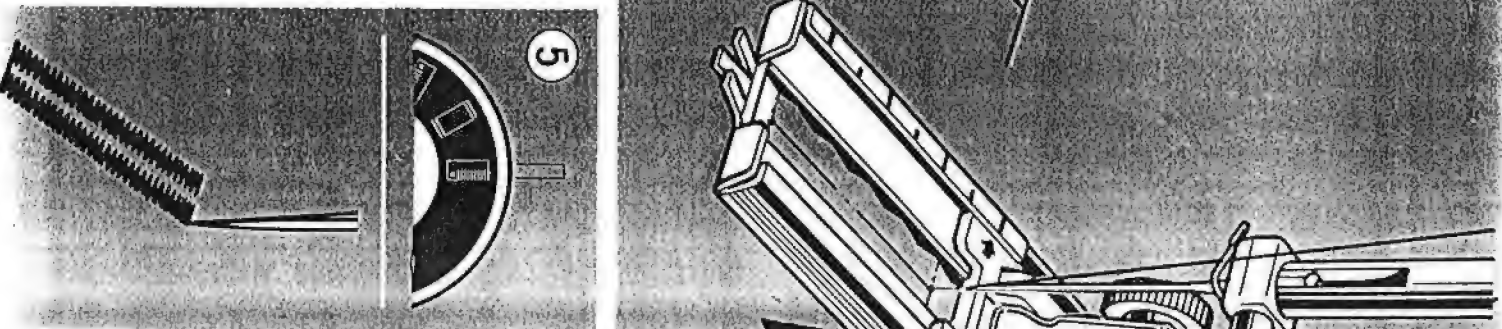
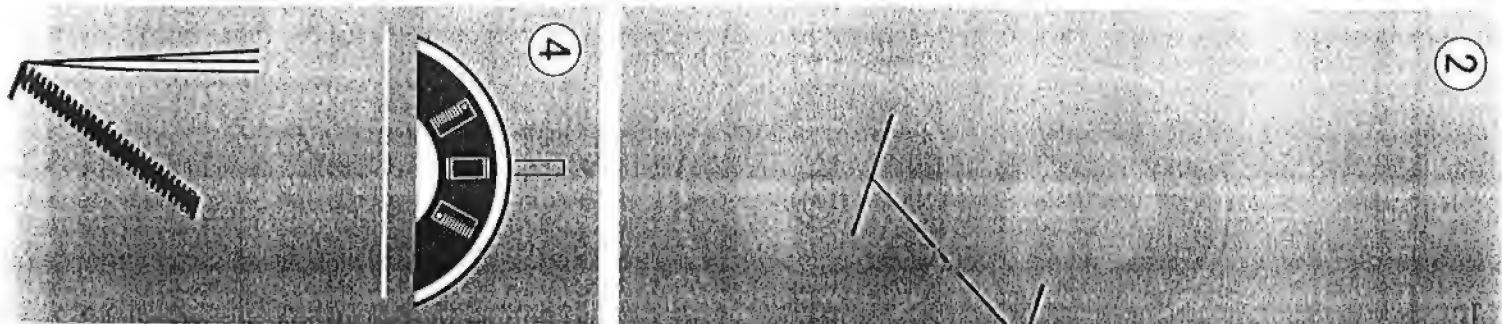
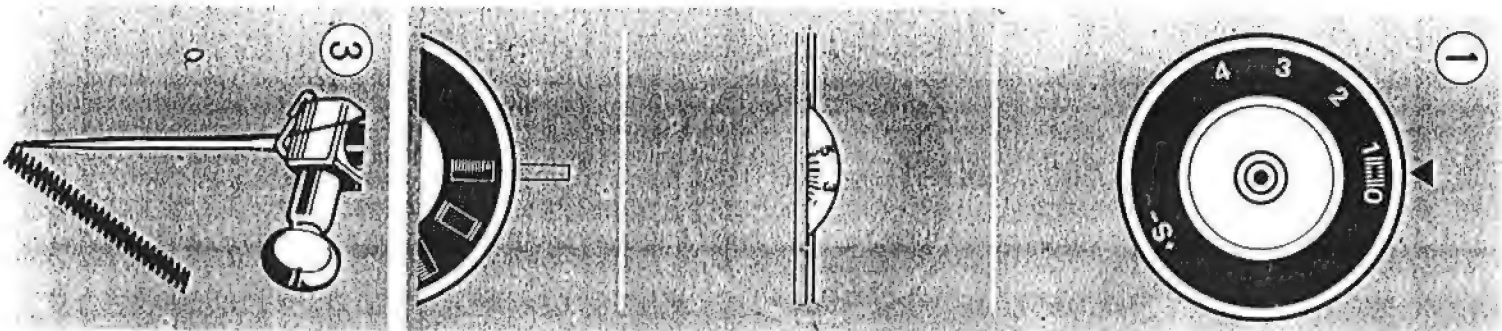
This stitch is used for decorative effects on table-cloths and napkins. See page 52.

4 Decorative Stitch (Code "F")

This stitch may be used for decorative effects, etc. See page 52.

5 Stretch Overlock Stitch (Code "H")

This stitch is excellent on softer, bulkier stretchy fabrics for finished 5 mm seams. See pages 48, 53.







Would You Like To Make A Beautiful Automatic Buttonhole?

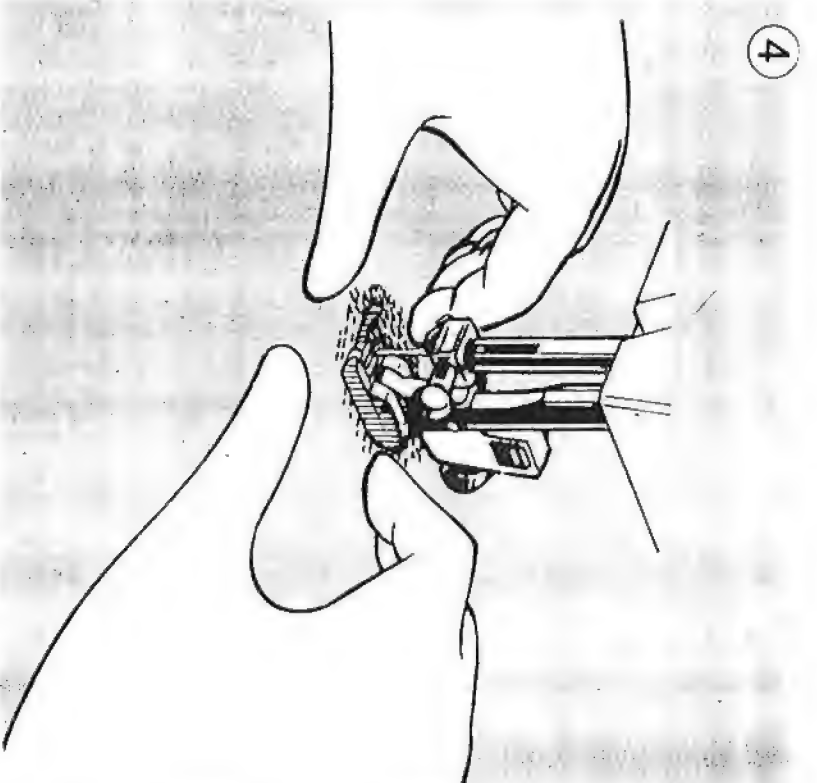
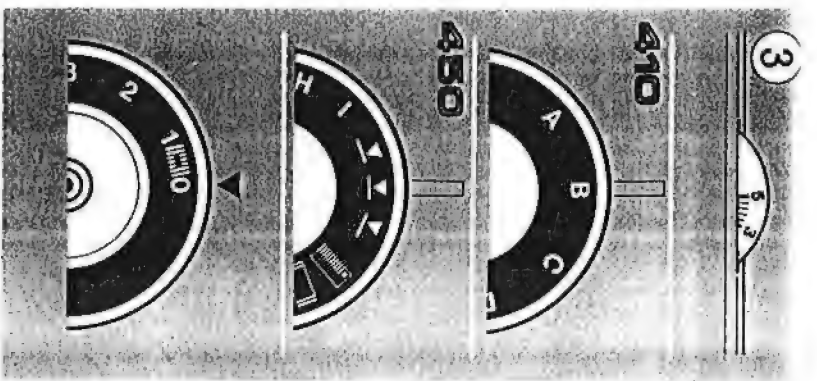
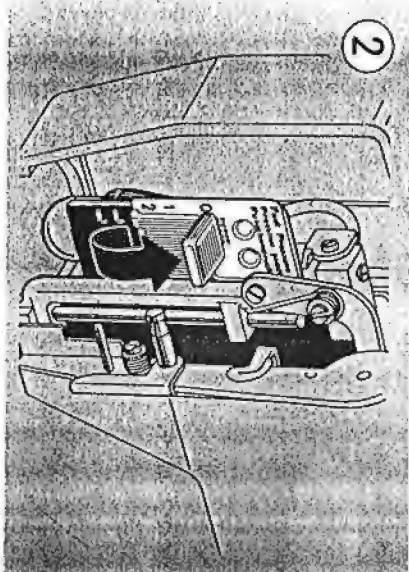
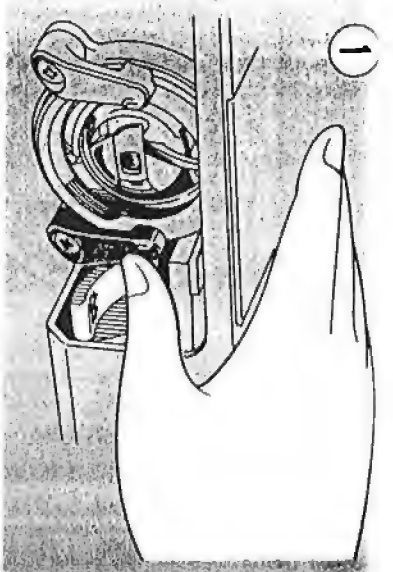
To make a buttonhole in any width from about 3 mm to 5 mm, there is no need to turn the work around the needle.

N.B. The best result can be achieved with a buttonhole width of not more than 4 mm. Nevertheless, should a 5 mm wide buttonhole be required, decrease the upper thread tension by one number on the tension dial.

Use the buttonhole foot.

- 1 Set the selector at  , blue, the length dial at the "Buttonhole" position, in blue near 0, and turn the width wheel to the position desired in the wider left half in order to obtain a buttonhole with a width between about 3 mm and 5 mm.

- 2 Mark the length of the buttonhole on the material. Pull the sliding sole of the buttonhole foot to the front (a), and place the work with the mark in the middle of the foot, the start being just beneath the needle.
- 3 Sew the first side. Raise the needle.
- 4 Turn the selector to  . Sew a few stitches. Raise the needle.
- 5 Turn the selector to  . Sew the second side. Stop just very slightly short of the first side. Raise the needle.
- 6 Turn the selector to  again. Sew a few stitches.
- 7 Turn the selector to the straight stitch and the length dial to 0. Sew a few stitches, holding back the material by hand.
- 8 Open the buttonhole.



Darning

Use darning thread and the all-purpose or embroidery foot.

With a little practice, you will find it easy to darn by machine and thereby make your household linen, undergarments, working clothes, etc. last two to three times longer.

- 1 Lower the feed-dog by pushing the end of the drop-feed button marked "X".
- 2 Set the foot pressure control at 0.
- 3 Set the stitch selector, stitch length dial and stitch width wheel as shown.

Don't forget to lower the presser foot before starting to darn and hold back the threads.

- 4 Lower the needle into the material. Stretch the material tightly between the fingers and sew a screen of closely woven stitches, moving from right to left and vice versa.
- 5 Keep the fingers as close to the foot as possible and finish the darn by sewing parallel serpentine backwards and forwards. To reinforce worn-out spots, it is not necessary to sew a screen first.

PART II Sewing Guide

The first part of the Instruction Manual shows you how to operate your machine.

Part II is the Sewing Guide which contains practical hints for easy sewing. It will help you to get the best out of your machine and so spend many hours of pleasurable sewing.

Although far from being exhaustive, the Guide gives you a good idea of the wide range of possibilities for practical and decorative sewing that are available to you, either by using the standard equipment of your machine, or by acquiring one of the extra accessories.

Remember to inquire regularly at your sewing machine shop and you will constantly make interesting discoveries.

If you want to find a specific piece of information in a hurry, consult the alphabetical index on the last page.

Needles, Thread and Fabrics

It is preferable to use good quality dull or mercerized thread. For darning, use fine, left-twist thread, because it is stronger. Remember that a dry thread becomes brittle. The best sewing machine will give poor results with a bad needle.

A golden rule:

Select the thread according to the type of work and material, and the needle according to the thread.

Darning, sewing or embroidery thread, depending on the fineness, durability or appearance required of the finished job.

First, get used to simple sewing, and you will be able to make use of other possibilities of your machine with greater confidence later on. The type of thread or needle size will be referred to subsequently in this guide only in special cases. All common fabrics can be sewn without the least difficulty.

Materials	Threads			Needle Sizes System 130/705H
	Cotton	Silk	Synthetic Fibres	
Sheer	120-100 *	Sewing	Sewing	15 x 1 **
Worn (darning)	Darning 120-100 *	Darning	Darning	60-70 7-10
Ordinary	100-80 *	Sewing	Sewing	80 10-12
Medium Weight	80-40 *	Sewing	Sewing	80-90 12-14
Thick Weave Heavy Sheets	40 *	Sewing	Sewing	90-110 14-18







* Sizes may change depending on the country.

** Or the system 705.





Adjustments


To simplify the explanations, the feet used and the adjustments are shown by the following symbols:

Foot:





















	All-purpose foot
	Embroidery foot
	Straight stitch foot
	Blind hem foot
	Buttonhole foot
	Zipper foot

Width wheel:

	5 – 5 mm wide (wheel turned to the right)
	3 – 3 mm wide (wheel at the centre position)
	2 – 2 mm wide (yellow line opposite the guide mark)
	1.5 – 1.5 mm wide (wheel turned to the left)

Length dial: 

Selector:

Automatic stitches (green zone)	Superautomatic stitches (red zone)	Code	
		Letter	410 450
 straight stitch	 elastic triple seam	B	▼
 zigzag	 triple zigzag	A	I
 elastic blind stitch	 elastic edging stitch	C	G
 three-step zigzag	 tricot stitch	D	A
 shell edging stitch	 stitch-and-overcast	E	D
 interlock stitch	 overlock	—	B
 checker stitch	 cross stitch	—	C
 domino stitch	 crown stitch	—	E
 scallop	 decorative stitch	—	F
 blind stitch	 stretch overlock	—	H




Examples:

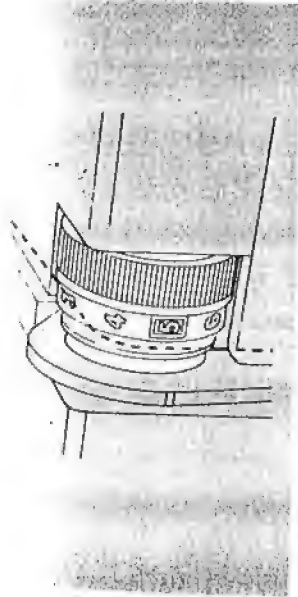
  5 

All-purpose foot, elastic blind stitch, stitch width 5, stitch length 1/2.

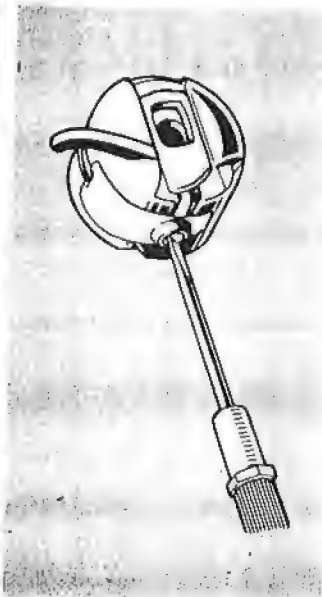
  5 

Embroidery foot, triple zigzag, stitch width 5, stitch length "S".

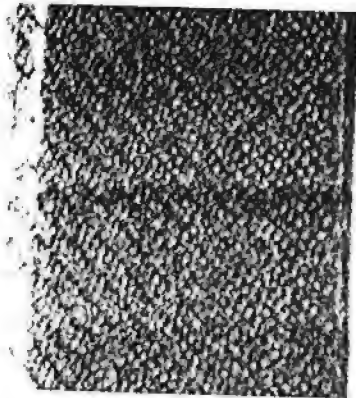
N.B. The symbol "  " and " 0  " indicate, respectively, that it is necessary to lower the feed dog by pushing the drop-feed button and to release the pressure of the presser foot by setting the control lever at " 0  ".



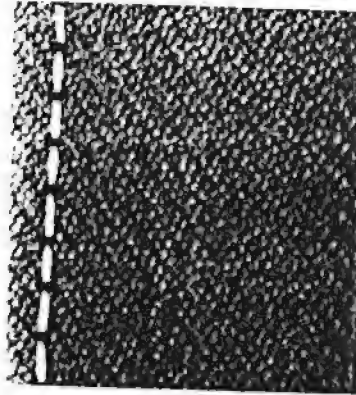
1



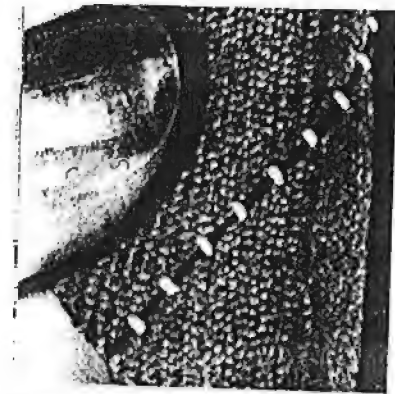
2



3



4



5

Universal Thread Tensions

The universal settings make it possible for most sewing jobs to be done without changing the tension, i.e.:

Lower tension: preset at factory. See page 11, "Universal Tension — Lower Thread" to check that the lower thread tension is correct.

Upper tension: number 5, framed zone, facing the guide mark — fig. 1.

If the tension has to be changed (for certain nylon or metallic threads, special seams, etc.), it is usually the upper tension that is modified by turning the knob (fig. 1), as follows:

A good tension — fig. 3

The threads are locked properly between the two layers of material.

Upper tension too strong — fig. 4

The lower thread is visible on top. Decrease the tension, turn to a lower number, between 5 and 1.

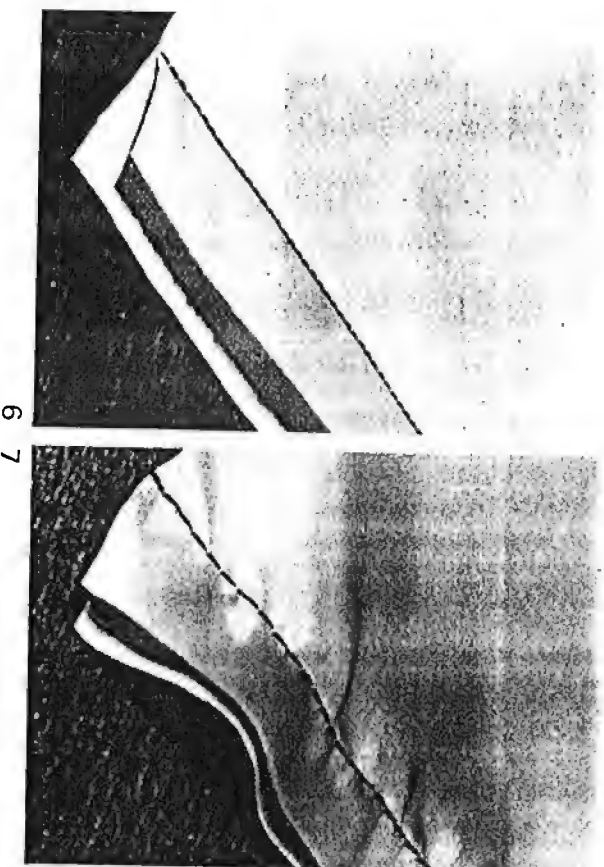
Upper tension too weak — fig. 5

The upper thread is visible underneath the material. Increase the tension, turn to a higher number, between 5 and 9.

If the tensions are tried out for a particular sewing job, do so on a double layer of a scrap of the material (and not single), as will be the case when the final sewing is done.

If the lower tension should have to be modified (certain nylon or elastic threads or special seams), turn the small screw in the bobbin-case tension spring to the right to increase tension, or to the left to decrease tension, with the screwdriver. — fig. 2

N.B. Do not turn the screw more than **one quarter turn** at a time, in either direction. Then, make a sewing test and check the results.



6 7

Straight Sewing — fig. 6



This generally presents no problems, provided that the length of the stitch is adapted to the material being sewn:

Sheer materials: More or less short stitches. Medium and heavy materials: Longer stitches.

Guide the work only, without holding it back.

Stitches that are too long — fig. 7, between stitch lengths 2 and 3, for example, have a tendency to gather sheer materials. Between 1 and 1½, the sewing will be done with neat results.

When trying out tensions for a special sewing job, use a double thickness of material (not a single one), as will be the case when the actual sewing work is started.

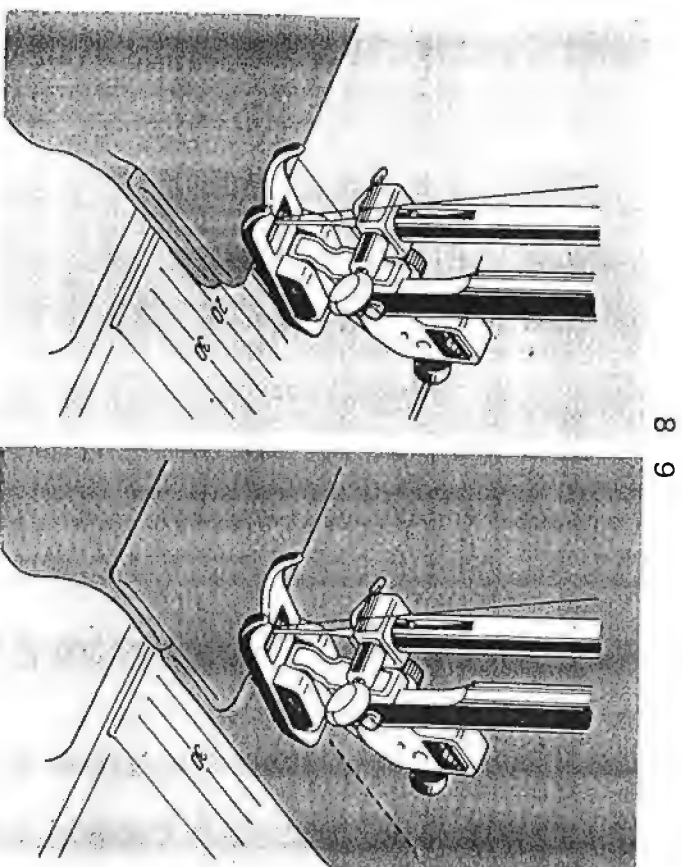
Thicknesses — figs. 8, 9



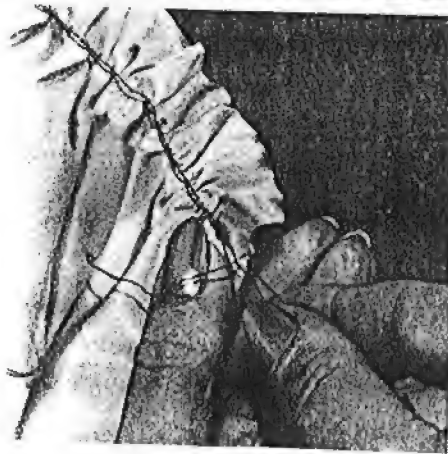
If this should be necessary, it is possible to raise the foot, in order to place especially thick pieces of work underneath it — see fig. 8.

Make sure that the presser foot lever is lowered again, otherwise the sewing will not be good.

For sewing over thick pleats or across seams, place the work as shown in the illustration — fig. 9. The extra thickness will pass more freely beneath the foot, without getting caught up.

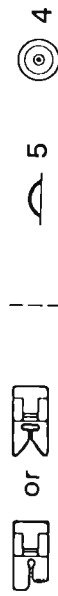


8 9



10

Gathering — fig. 10

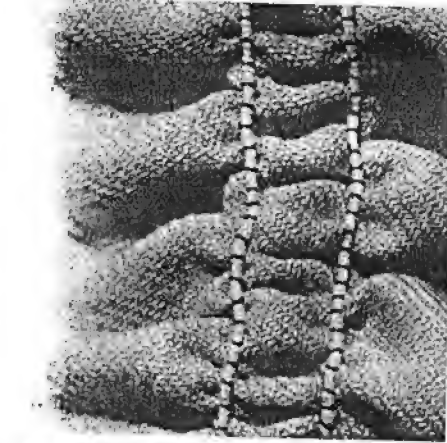


To gather a sheer or medium fabric, make use of the stitch length (and the tension, if necessary): maximum stitch length and a weak upper tension (lower numbers). Sew two parallel rows of stitches, one next to the other. Knot the threads at one end and pull the two lower threads to form the gathers. Thus, the gathers can be easily spread out evenly, to accentuate the roundness of an armhole, for example.

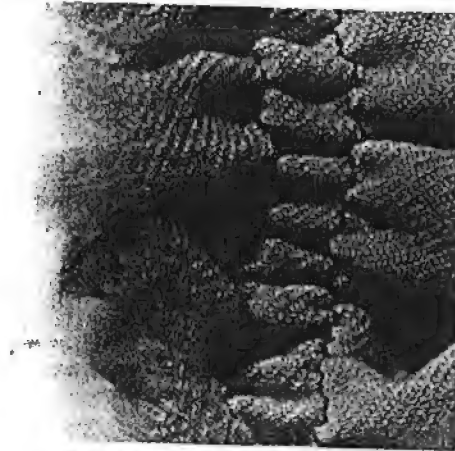
Gathering With Elastic Thread — figs. 11, 12



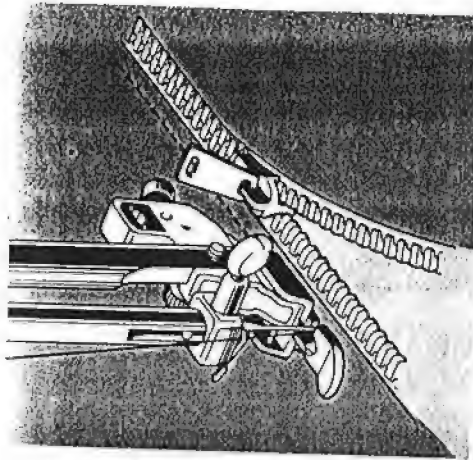
Wind elastic thread (such as Lastex) by hand or machine onto the bobbin, smoothly and without stretching it, then put the bobbin into the bobbin case, drawing the thread through the tension, as usual. The upper thread should be a good quality sewing or embroidery thread. Try out before doing the actual



11



12



13

sewing job. The gathers will be more pronounced with a long stitch (if necessary, increase the upper tension). The material needed will be about twice the length of the finished work. It is possible to sew two, three or more rows of gathers. To sew the second and successive rows, stretch the material in front of the foot to avoid the preceding gathers from being sewn in, under the foot.

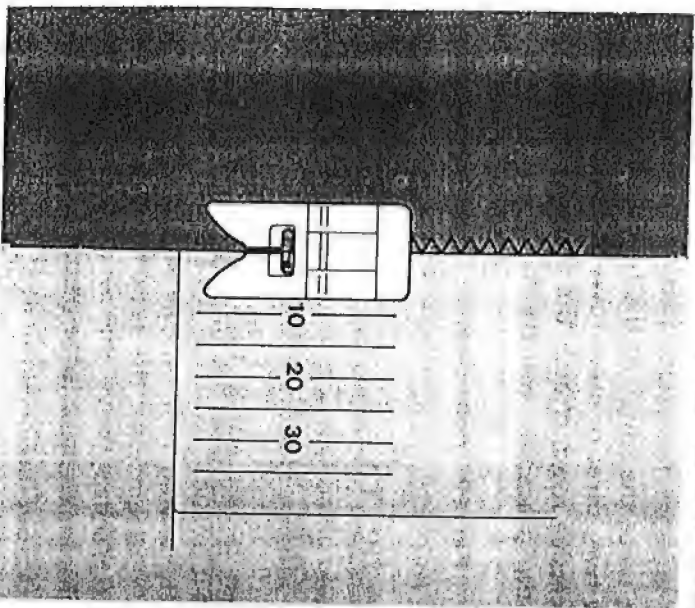
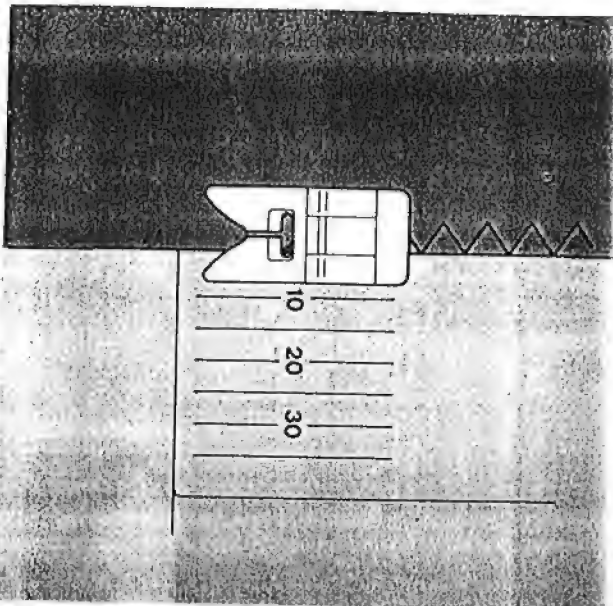
Fig. 11: wrong side. Fig. 12: right side.

Zip Fasteners — fig. 13

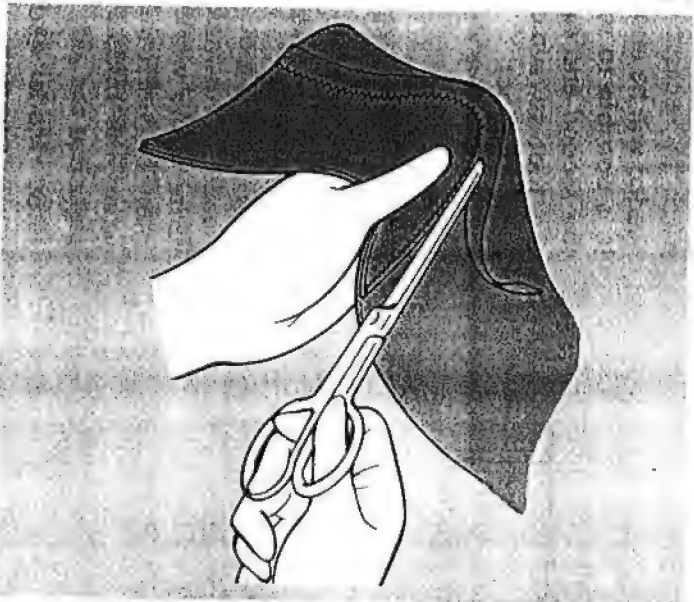
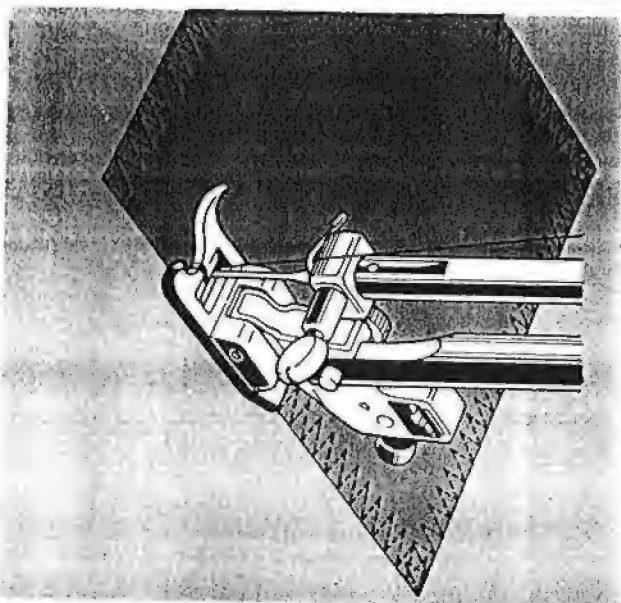


The zipper foot can be set either to the left or right of the needle. This makes it possible to sew in the zip fastener without turning the work, by sewing first on one side of the foot and then on the other. Begin with the fastener opened. Then, when the middle is reached, leave the needle in the material and close the zip. This makes it easier to pass the clasp.

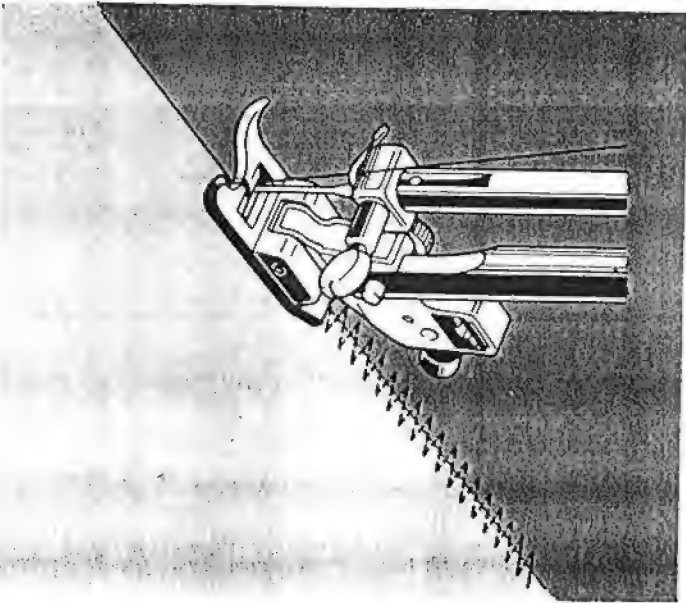
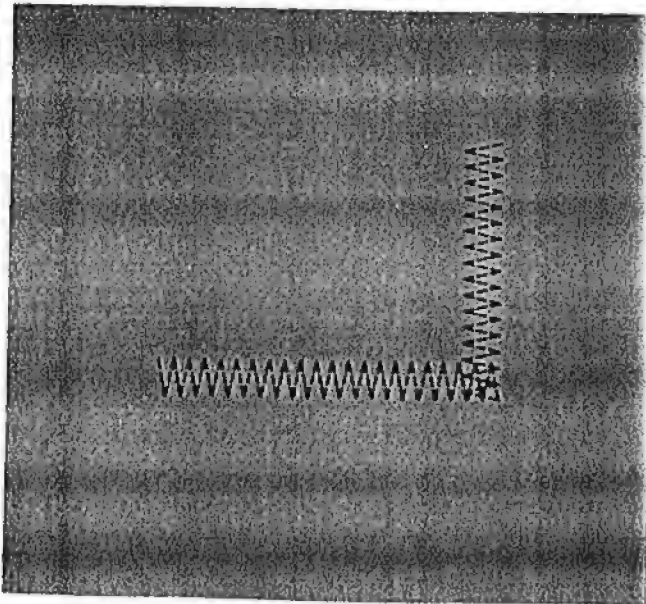
N.B. Model 450 : Set the selector at "▼", centre needle position.



14
15



16
17



18
19

Overcasting — figs. 14, 15



Fig. 14 — Darning or embroidery thread
Simply follow the illustration.

For medium or thick material, use stitch width 5 and length $1\frac{1}{2}$ —2, position the cloth guide on the foot at the right side of the stitch width, and guide the material along the cloth guide.

Fig. 15 — A hint for fine materials: position the edge of the material at the centre of the foot and guide the material along the cloth guide. Stitch width 5, length $1\frac{1}{2}$ —2.

The needle will then stitch over the edge of the material to the right, and the result will be neat overcasting with a finished width of 2 mm ($\frac{1}{16}$ ").

Overcasting with the three-step zigzag with a shorter stitch is particularly suitable for sheer and medium materials. This overcasting stands up to repeated washing and keeps the material flat.

Patching — figs. 16, 17



Fine darning thread

Place the patch over the damaged part. Sew around the edge of the patch with the overcasting stitch. Then cut away the damaged part, close to the stitching. With this simple method, the patch can be sewn on in one operation and there are no excess thicknesses or felled seams.

When patching jersey, proceed in the same manner but it is preferable to make the patch circular and sew it on about 1 cm ($\frac{1}{2}$ "') from the edge. Then cut off the excess material around the edge of the patch and the damaged part of the original material.

Jersey Hem

Only one fold is made and sewn in basically the same way as the patch, namely 1 cm ($\frac{1}{2}$ "') from the edge, which is then cut back close to the stitching.

Instant Darning — fig. 18



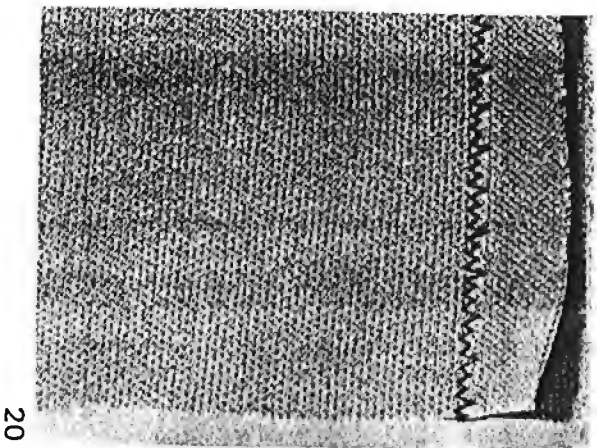
If a fine darning thread of the right shade is used, a tear or ladder in jersey can be repaired quickly and the darn will be almost invisible (fig. 18).

If the material is very worn or frayed, place a piece of gauze underneath. Sew once down the middle of the tear, drawing the edges together as close as possible. Then sew again on either side, making sure that the needle pierces the central stitching.

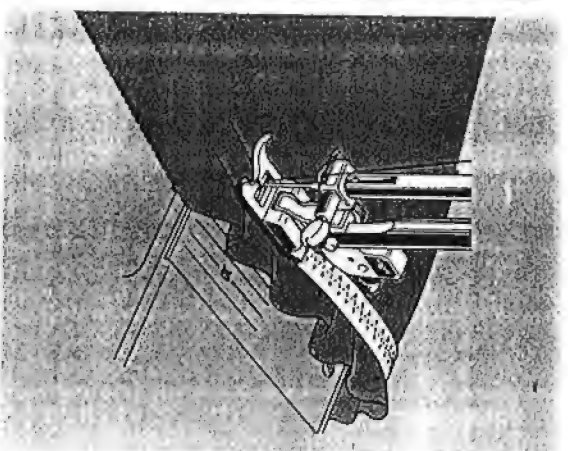
Edge-to-Edge Sewing — fig. 19



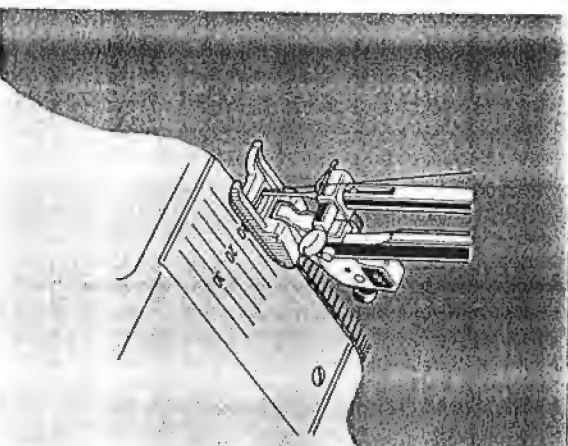
Place two selvages edge to edge and sew. This is useful for turning worn sheets "side to middle". Excess thicknesses are avoided and the stitches disappear in the material.



20



21



22



23

Stretch Seam in Jersey Fabric — fig. 20



2-3

1-1½

This seam is very stretchable and is used for open seams in stretch jersey fabrics. Use the three-step zigzag or overlock afterwards to overcast the seam allowances.

Sewing on Elastic — fig. 21



5

1

Place the elastic on the work as shown in the illustration. In this way it is not necessary to pull the elastic in order to stretch it. Just sew slowly, while feeding enough material under the foot to form gathers. The stitching will remain supple and easily stretchable. For very accurate work, sew a gathering thread and distribute the gathers before sewing on the elastic.

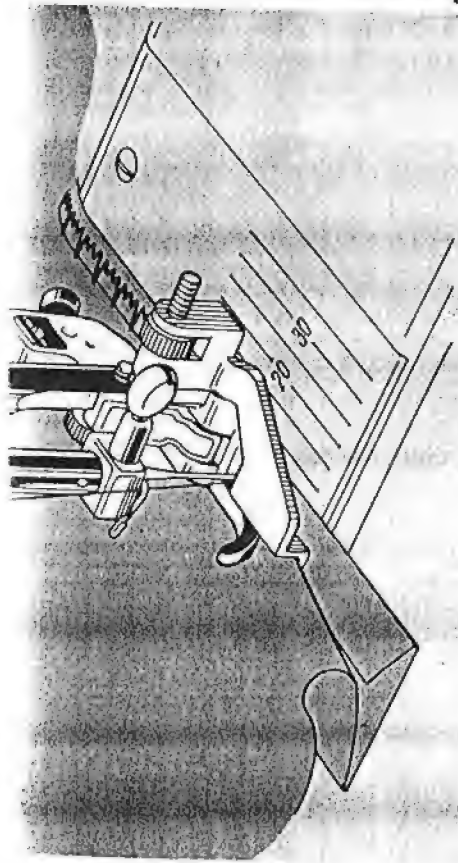
Edging Stitch — figs. 22, 23



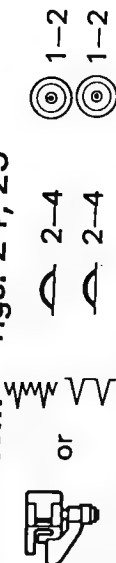
3-5

½-¾

The elastic blind stitch is very useful and suitable for sewing borders on table-cloths, serviettes and small covers, as well as for appliqué work and reinforcing. If necessary, the stitching can be given a relief or the material held in shape by sewing on one or two threads of pearl cotton, at the same time, which are placed flat under the foot in the right and left grooves. This stitch is also useful for repairing buttonholes. Proceed in the same way as with the zigzag stitch, as shown on page 46.



Blind Hem — figs. 24, 25



For invisible hems.

Place the material wrong side up, folded as in the illustration, fig. 24. Set the cloth guide of the blind hem foot at the centre and guide the upper fold of the material along the cloth guide so that the wide zigzag catches only the upper fold of the material. After sewing, open out and press.

24

Elastic Blind Hem — fig. 25



For woollens, stretch and jersey fabrics, it is not necessary to fold over the edge of the hem. Leave it flat, as shown in the illustration, fig. 25, then overcast and sew the blind hem in a single operation. The stitching will remain easy to stretch.

Hemming with the Scallop — fig. 26



Hemming soft knits and tricot can be done very easily and attractively with the scallop stitch. Simply turn over the hem by the desired amount and press. Then, with the material placed right side up, sew with the scallop stitch at about 1 cm ($\frac{1}{2}$ "') from the edge. Additional rows can be sewn above the first row, if desired. Cut off the excess material carefully.

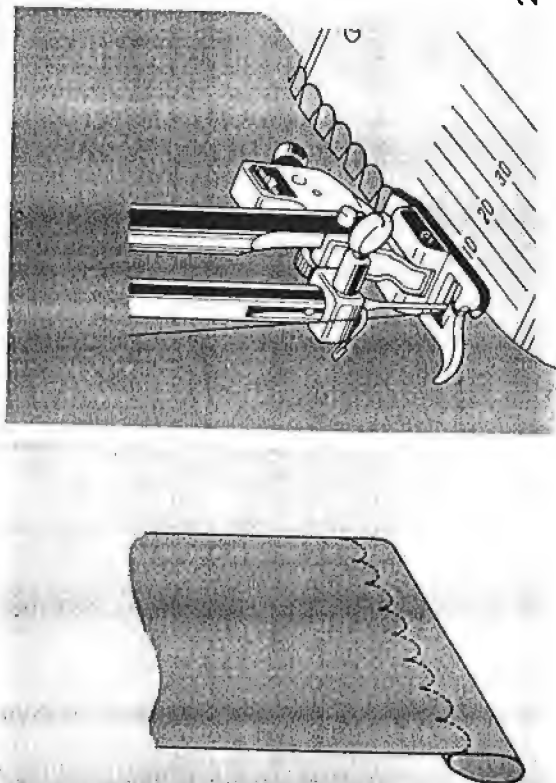
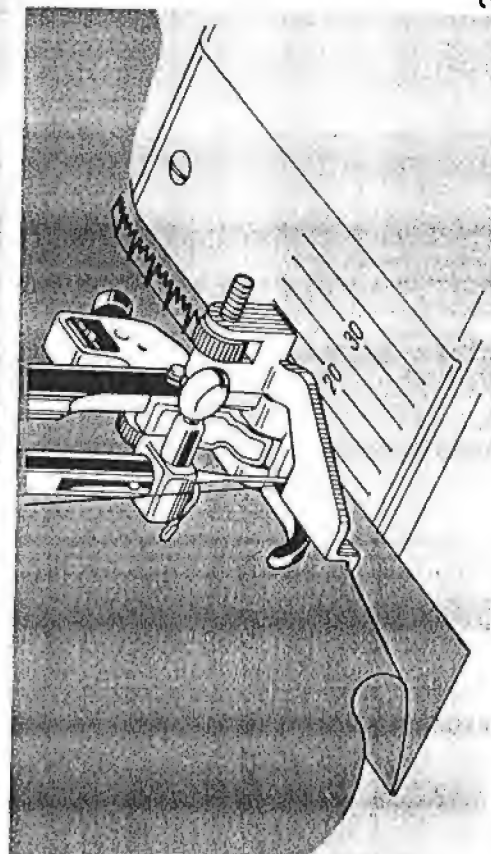
25

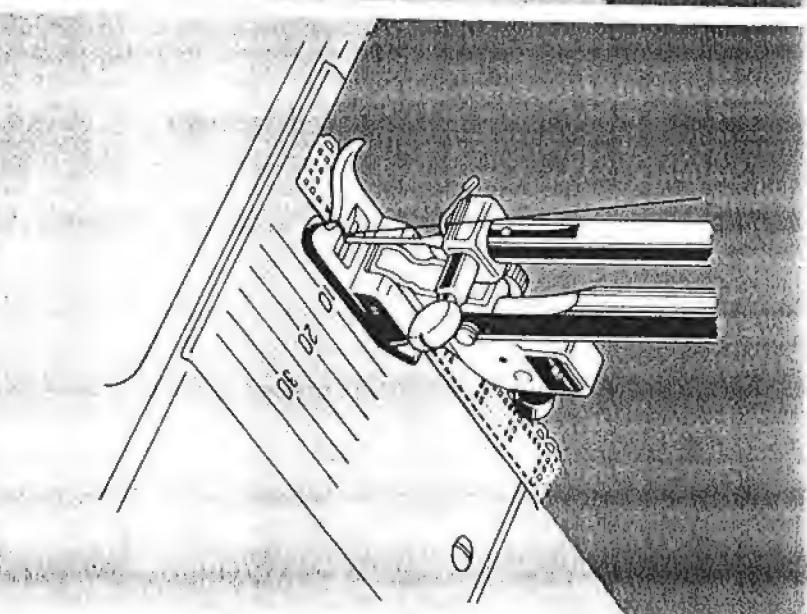
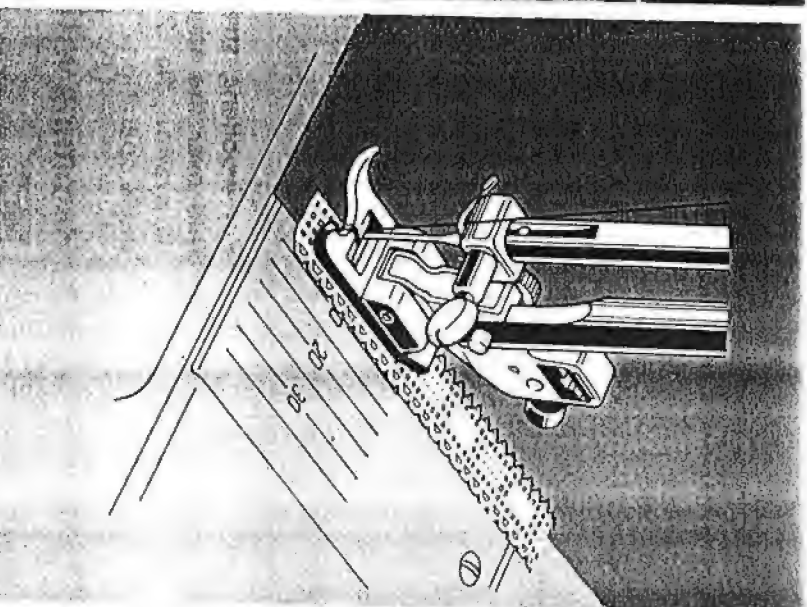
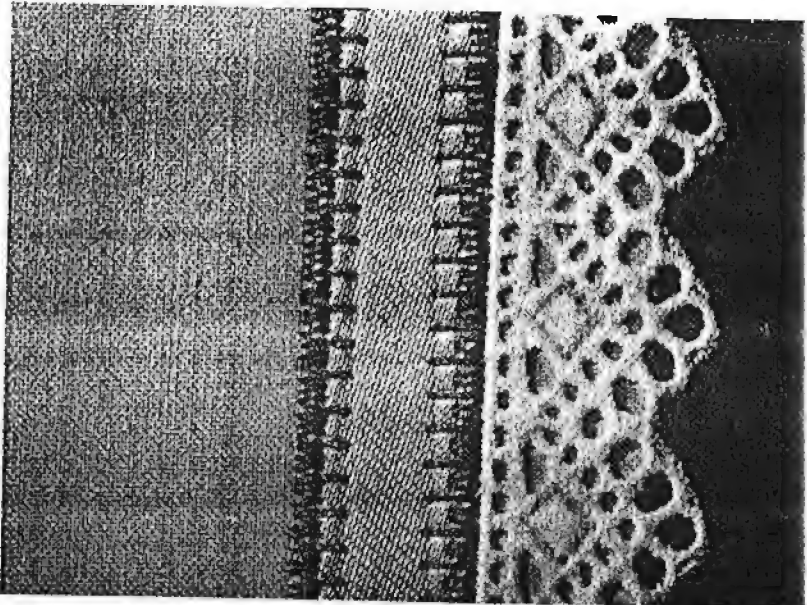
Shell Hem — fig. 27



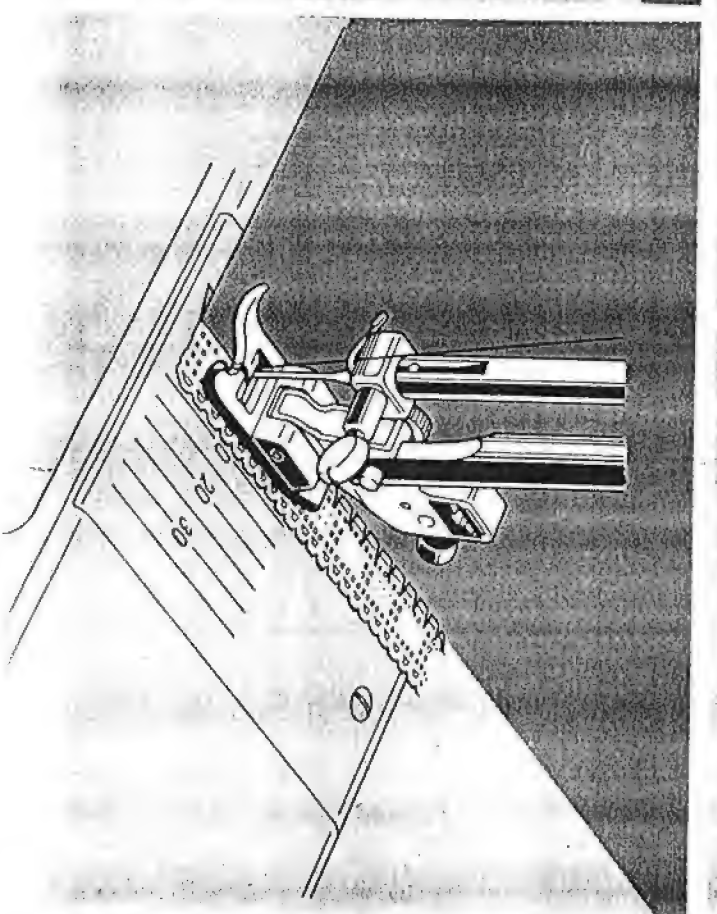
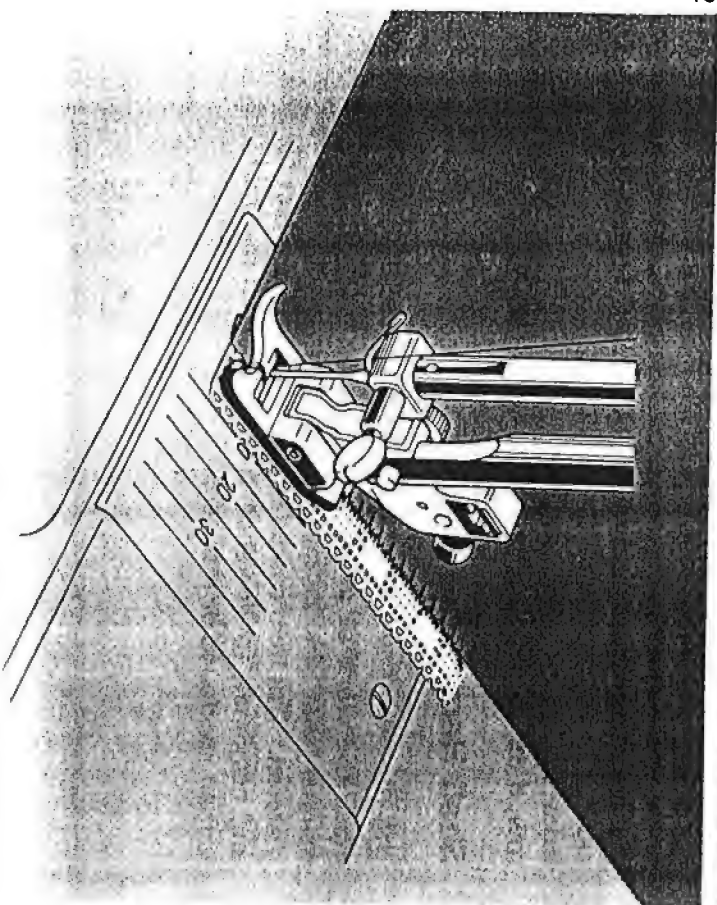
Place the work as shown in the illustration and sew in such a manner that the zigzag is stitched beyond the edge of the material. This hem can be sewn on the fabric direct for armholes and necklines, for instance, or on a strip of bias material, which is then appliquéd or inserted.

26 27





28 29 30
31 32

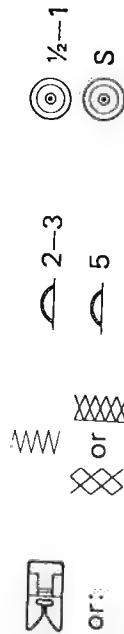


Lace Borders — fig. 28



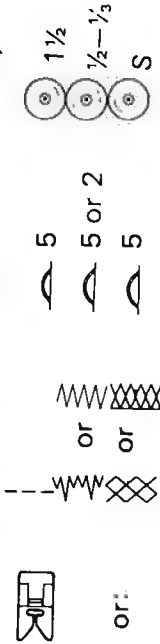
For the borders of sheets, table-cloths etc. Fold the material at 3 to 5 cm ($1\frac{1}{8}$ to 2") from the edge. Place the lace slightly in from the edge (2 to 3 cm— $\frac{3}{4}$ to $1\frac{1}{8}$ "). Sew it with small stitches, length $1\frac{1}{2}$ to 2, matching thread. Next, place a ribbon along the edge of the lace and sew it with the edging stitch. Thread and colour as desired. Cut off excess material on the underside, flush with the embroidery.

Lace Appliqué Work and Sewing on Lace — fig. 29



Use either of the stitches, depending on the finished appearance desired. Place the lace about $\frac{1}{2}$ —1 cm ($\frac{1}{4}$ — $\frac{1}{2}$ ") from the edge of the material. Sew it on and then cut away the excess material close to the seam.

For Lace without a Selvedge or Inlaid Embroidery, or for Insertions — figs. 30, 31

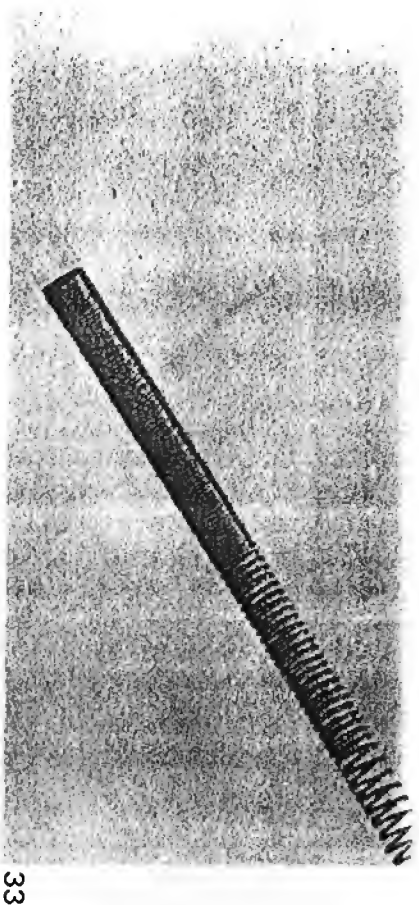


Place the lace or embroidery on the material, right sides together, fig. 30. Sew it on with **straight stitches**, about 5 mm ($\frac{1}{4}$ ") from the edge. Then open it out, so that the seam can be felled beneath the material, fig. 31. Finish off with a zigzag stitch, stitch width 5 or 2, stitch length $\frac{1}{2}$ — $\frac{1}{3}$ or with the elastic blind stitch. Or, just sew the lace and material, right sides together, with the tricôt stitch or zigzag over the basting. Then, raise the lace and fold the seam inwards.

Inserting Lace with the Interlock Stitch — fig. 32

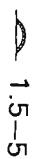


A very fine lace insertion can be made with the interlock stitch. Sew so that the straight stitch of the interlock is on the fabric and the small zigzag stitch catches into the lace.



33

Satin Stitch — figs. 33, 34



Embroidery or darning thread.

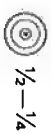
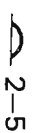
Fig. 33 — A beautiful satin stitch can be obtained by gradually reducing the stitch length to between $\frac{1}{2}$ — $\frac{1}{4}$.

Fine or soft material should be reinforced by placing paper underneath. To make sure that the satin stitch is suitable for the work (table-cloths, sheets, etc.) **first try it out on an identical piece of material.** To obtain even stitching, pay attention to the following details:

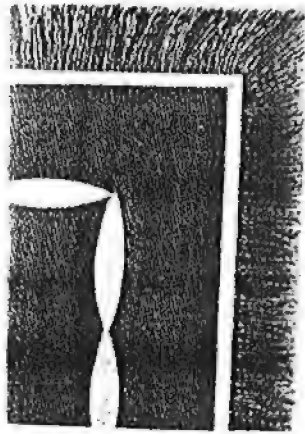
- **Never hold back the work,** simply guide it.
- When sewing a large or heavy piece of material, **make sure that its weight does not slow down the rate of feed.** If necessary, hold up the material, in order to feed it evenly under the foot.

Fig. 34 — **When sewing a hem,** sew the satin stitch **on top of the hem,** at the inner edge, so that **one side of the satin stitch will be sewn flush with the inside of the hem.** The result will be more attractive.

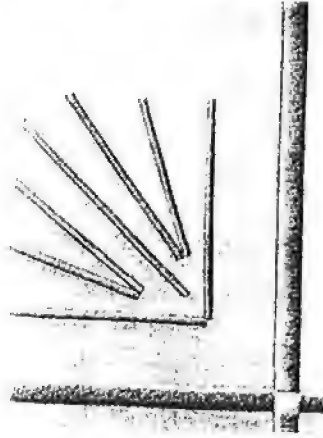
Monograms — fig. 35



First draw the monogram. Depending on the material, either **reinforce it with a piece of paper,** or stretch it over an embroidery hoop. No special skill is called for to achieve good results with straight letters. Letters can be given a sharper relief by sewing over the original stitching once or twice with the same stitch width.



36



37

Fringed Edges — fig. 36



2-5 \odot $\frac{1}{2}$ — $\frac{1}{4}$

For table-cloths, tray cloths, scarves, etc.

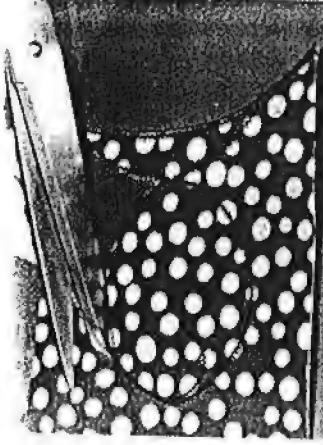
Sew a satin stitch at 2 to 3 cm (about 1") from the edge of the material and then sew a tapered satin stitch, turning the stitch width wheel to the right or left repeatedly while the machine is running. Pull out the threads to make the fringes.

Designs for Table-cloths — fig. 37

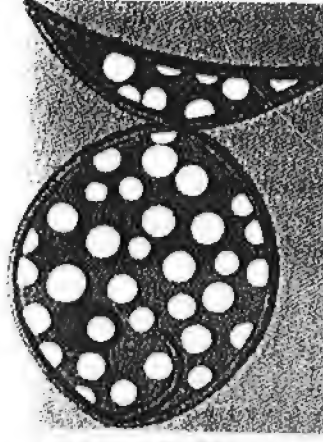


5-2 \odot $\frac{1}{2}$ — $\frac{1}{4}$

To make this lovely design, first of all sew the satin stitches over the hems, width 5, length $\frac{1}{2}$ — $\frac{1}{4}$. Then sew the designs in the corners using a small satin stitch, width 2 or 3.

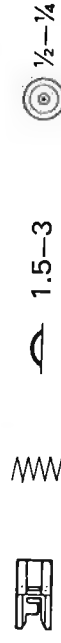


38



39

Appliqué Work — figs. 38, 39

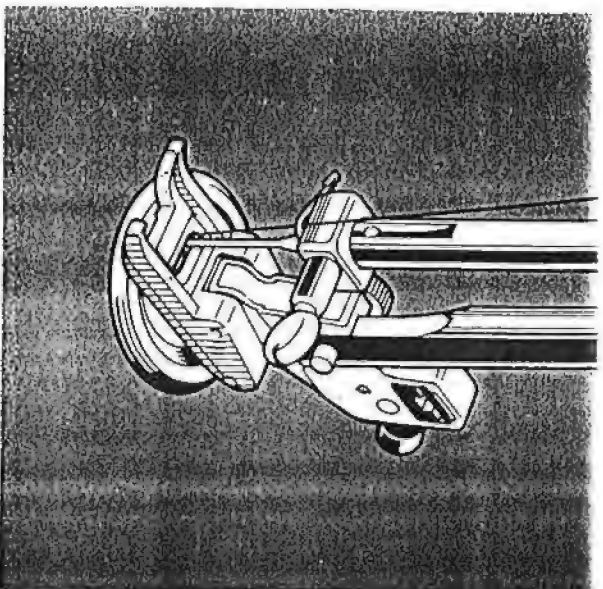


1.5-3 \odot $\frac{1}{2}$ — $\frac{1}{4}$

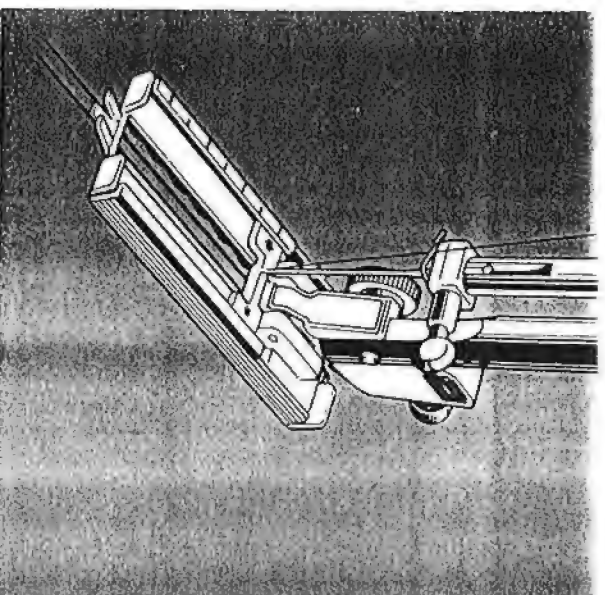
This is fun to do. Sew the outline of the appliqué design with straight or small zigzag stitches, width 1.5, length 1. Then, cut away the excess material close to the stitching.

Finish by sewing a satin stitch over the edges of the appliqué, stitch width 2-5, as required.

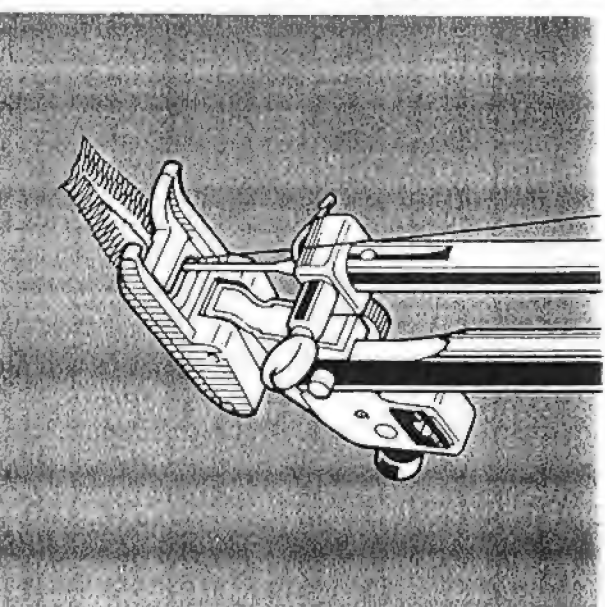
In this kind of work, the choice of pattern and colour is the main thing. Appliqués look good on aprons, pockets, table-cloths, curtains, cushions, etc.



40



41



42

Buttons — fig. 40



Feed dog:

Set the stitch length at "0" and adjust the stitch width, so that the needle passes through the eyes of the button. Sew 6 to 8 stitches. Pull the thread through underneath and knot. If buttons often have to be sewn on, the button foot will be found to be of great help (see extra accessories, page 61).

Reinforced Buttonhole — fig. 41

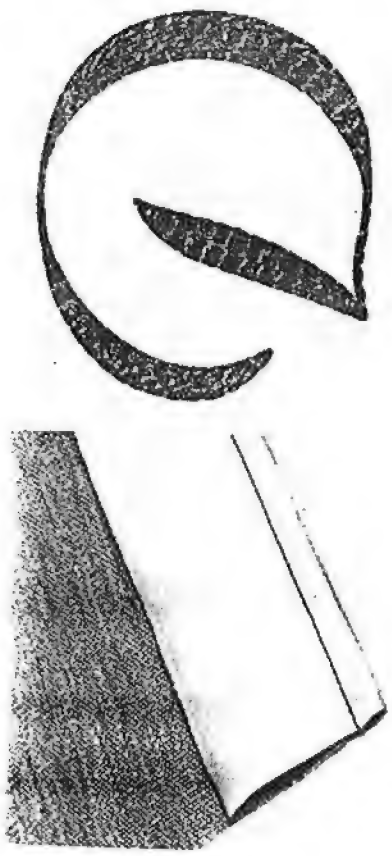


Place a piece of soft cord under the sliding sole of the foot, leaving a certain amount of cord sticking out at the front of the foot. Sew the buttonhole covering the cords on both sides of it. Next, pull the right end of the cord. Cut both ends flush with the buttonhole.

Repairing Buttonholes — fig. 42



Sew over the frayed edges with a fairly loose satin stitch. If the material is out of shape, reinforce it underneath with paper.

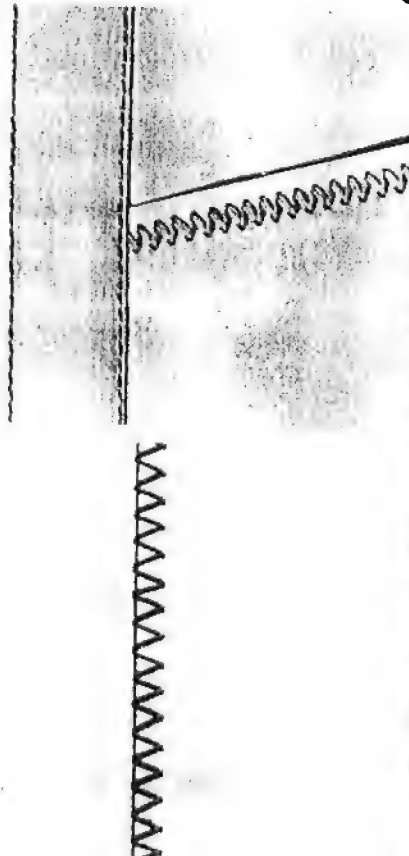


Elastic Triple Seam — fig. 43



Very strong, this stitch is preferred for seams that must withstand hard wear. It is suitable for medium-weight and heavy fabrics, as well as being excellent for sewing material on the bias. This seam is difficult to unstitch. It should thus be used only for final seams.

43 44



Monogram — fig. 44



Draw the monogram on the right side of the material, the latter preferably being stretched over an embroidery hoop. Sew around the outline of the monogram, then fill in the interior.

Triple Zigzag — figs. 45, 46



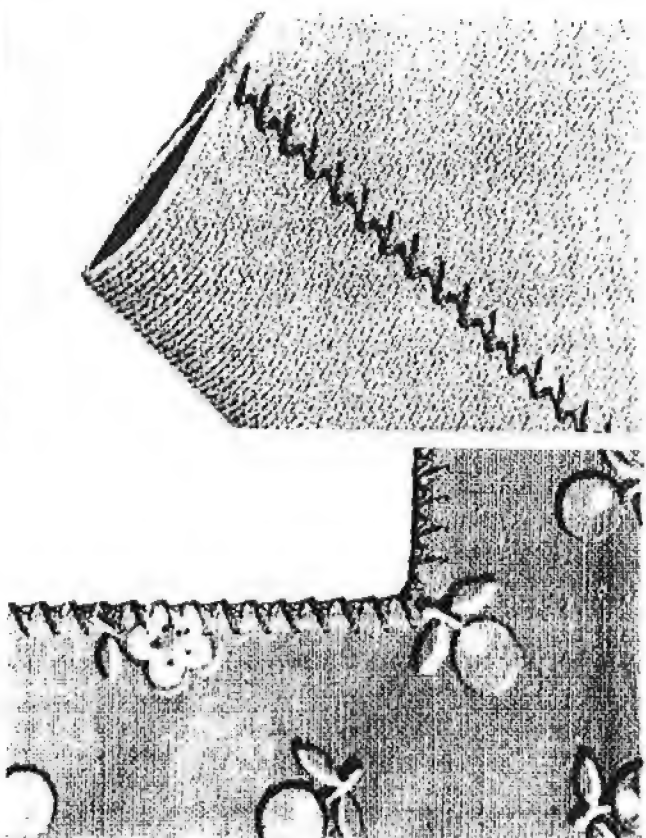
The edge of a sheet or table-cloth will look especially attractive, if you embroider it with a triple zigzag stitch. Sew at the edge of the hem, so that one side of the embroidery is flush with the edge of the hem, fig. 45. Perfect for both reinforcing and decorating seams of jeans, edges of pockets, etc. Fig. 46 also shows a waistband reinforced with the elastic triple stitch.

45 46 47

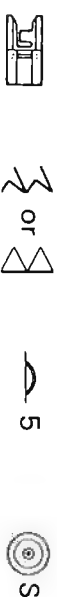
Patching or Reinforcing — fig. 47



This stitch makes it easier to sew patches or reinforcements on trouser seats, shoulders, cuffs, trouser pockets, etc. Sew the stitches on one side of the zigzag as close to the edge of the patch or reinforcement as possible, but still in the original material, and the stitches on the other side of the zigzag well into the piece being sewn on, as shown in the illustration.



Elastic Edging Stitch, or Stretch Overlock — figs. 48, 49



For sewing and decorating a hem, especially in stretch fabrics. Fold the hem once only, sew with either of the stitches, about 1 cm (3/8") in from the hem, then cut off the excess material on the reverse side, along the edge.

They can be used as a decorative stitch for the edge of a tablecloth, for example. Prepare the edge in the usual way. Baste. Sew the final seam with either of these stitches.

48 49 Sewing with the Tricot Stitch, Stitch-and-Overcast, Overlock or Stretch Overlock — (Stretch) — figs. 50, 51

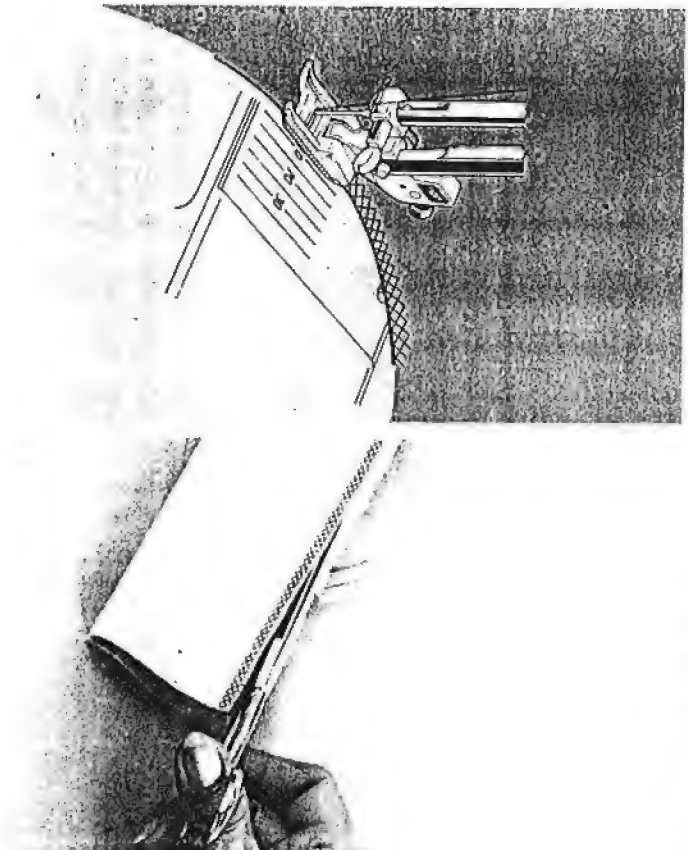


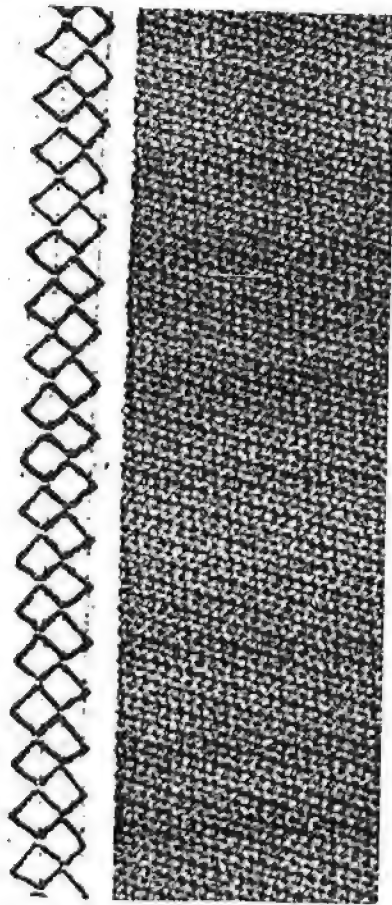
These stitches sew and overcast in a single operation. They are suitable for stretch fabrics, wool or cotton jersey and loosely machine-knitted materials and are also very decorative. They can be used for assembling all kinds of garments, for sewing sleeves, shoulders and side-seams and for finishing, overcasting, etc.

N.B. To overcast with the Stretch Overlock, place the work to the right.

These stitches can be sewn either at the edge of the material or slightly in from the edge, in which case the excess material is cut away afterwards. The method you use will depend on the quality of the material. Make a test on a spare piece of material before doing the final sewing.

Strong and quickly sewn, these stitches make French and felled seams unnecessary.





52 53

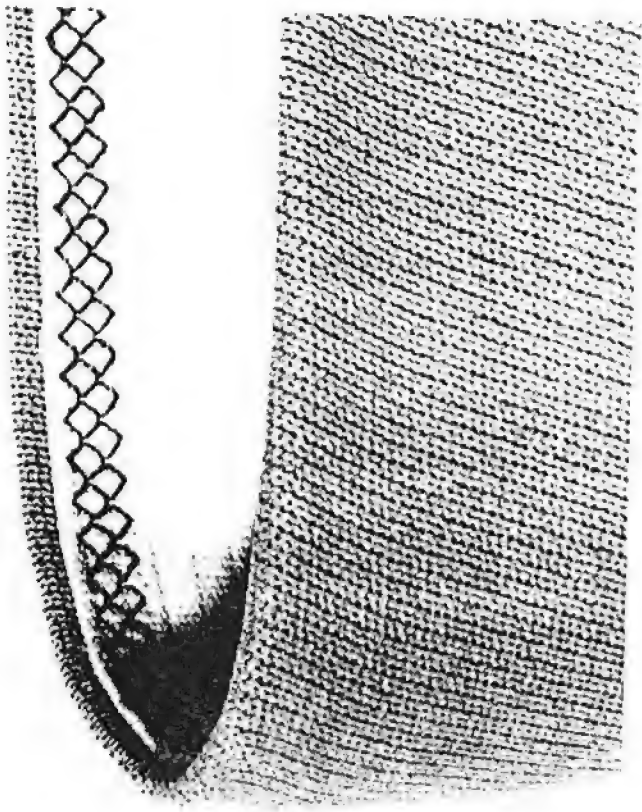
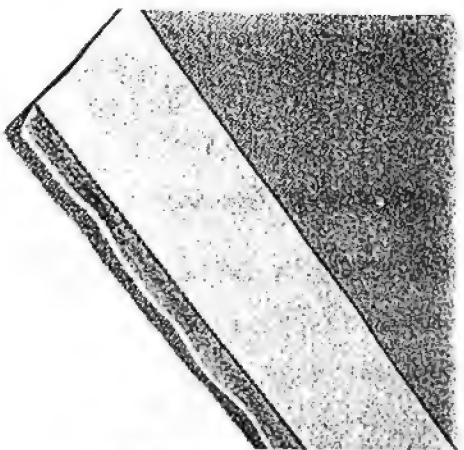


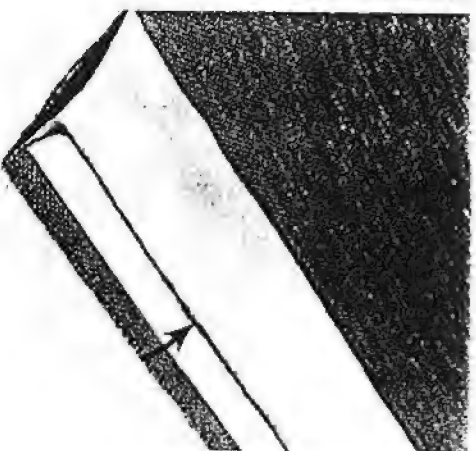
Diagram as Waistbands for Skirts or Trousers — figs. 52, 53



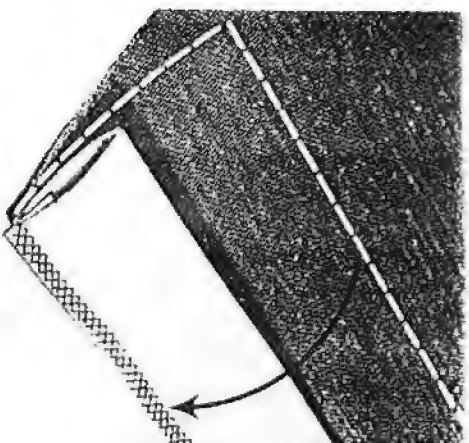
Place the diagram on the right side of the garment, about 5 to 10 mm ($\frac{1}{4}$ to $\frac{1}{2}$ ") from the edge. Sew and then fold down inside the garment.



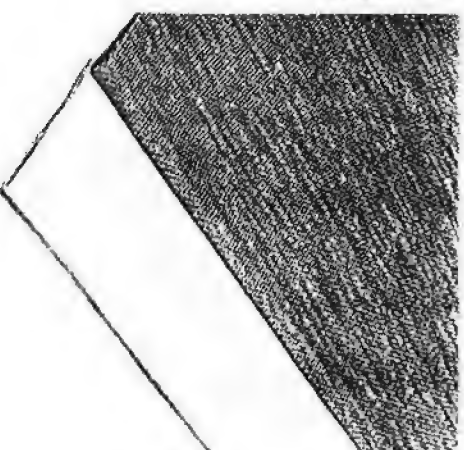
54



55



56



57

Sewing on Borders, Stand-up Collars, Cuffs in Jersey or Knitted Fabrics — figs. 54, 55, 56, 57



Fig. 54 — Sew the border, laid out flat, slightly in from the edge with the elastic triple seam, right side against the right side of the garment.

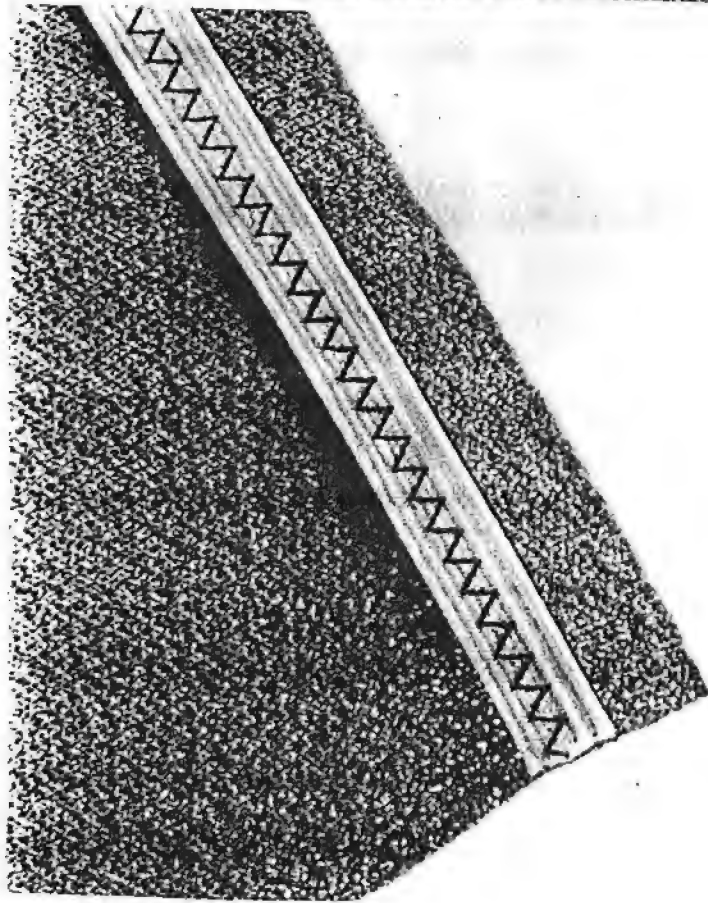
Fig. 55 — Open out the seam as illustrated.

Fig. 56 — Fold over the edging against the open seam.

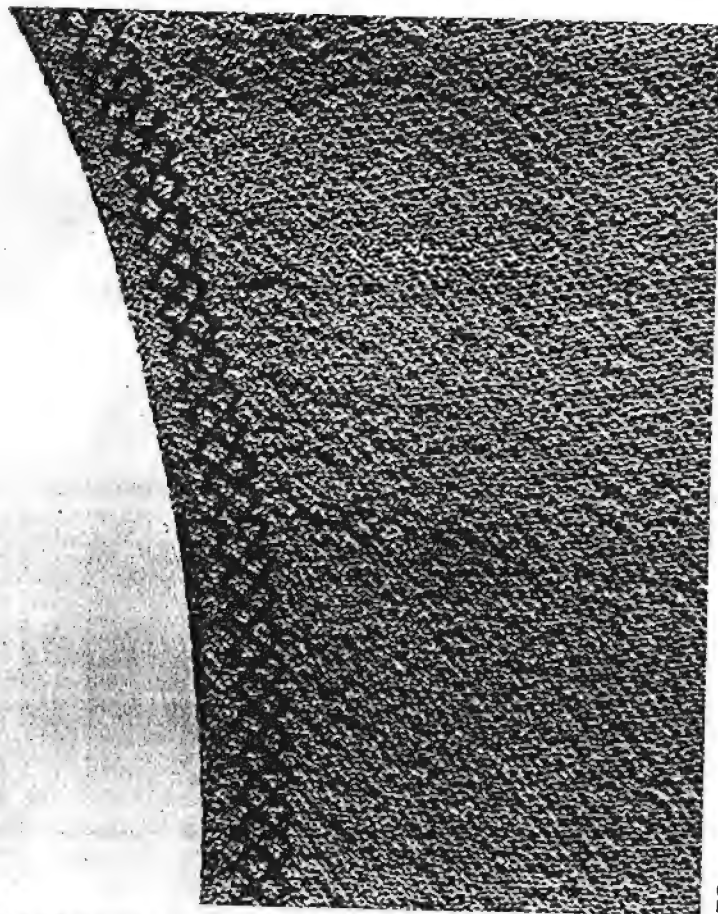
Sew with the tricot, stitch-and-overcast, overlock, or stretch-overlock stitch, stitch width 5, length "S".

Fig. 57 — Fold out the border and iron or press using a damp cloth.

N.B. For stand-up collars and for cuffs, join the edging first at its ends, circumference as required, using the triple seam.



58 59

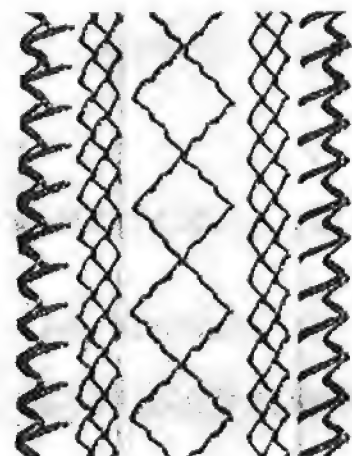
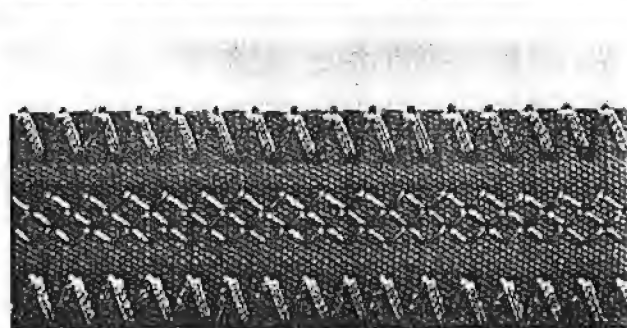
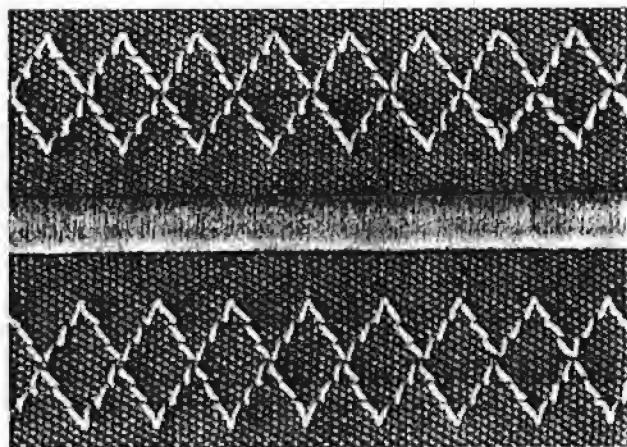
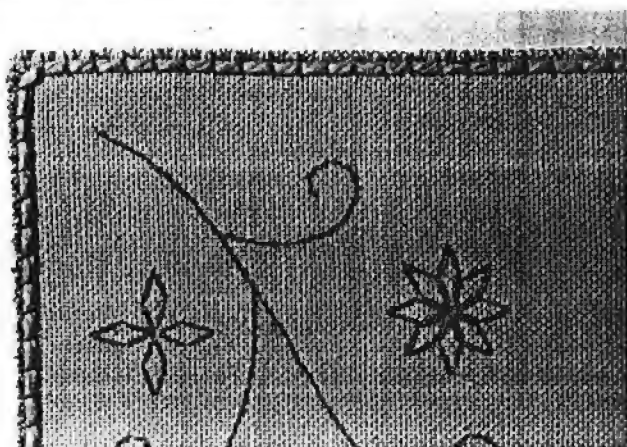
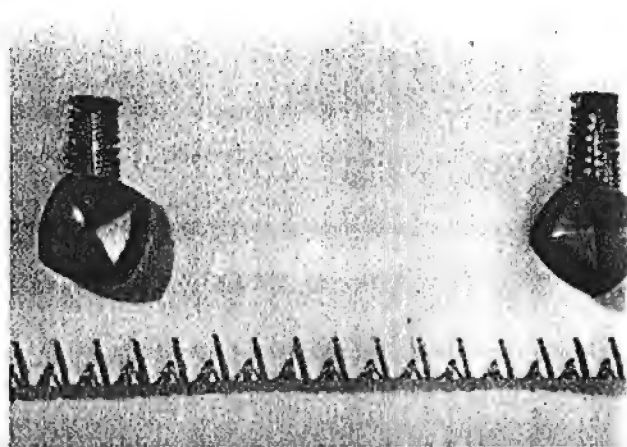
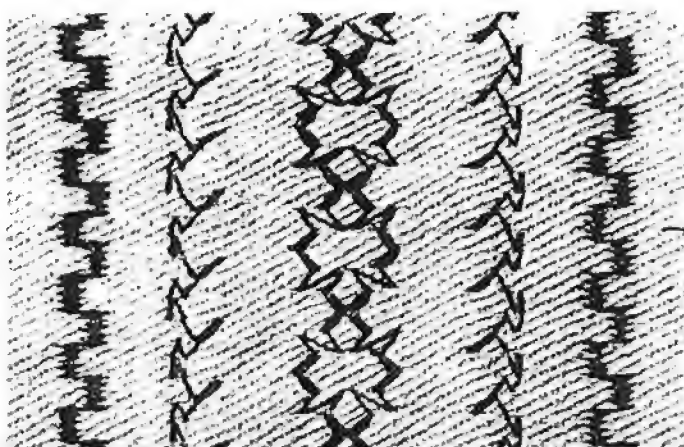


Covering Elastic — figs. 58, 59

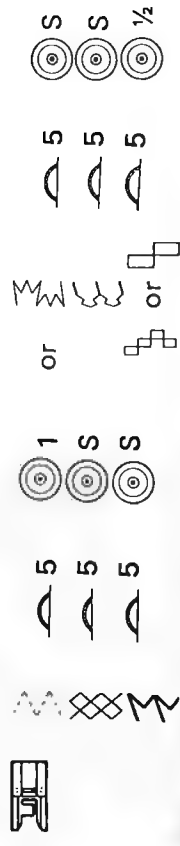


Elastic around the edges of necklines, in shoulder-straps, around armholes or the legs of bathing suits or sportswear is covered as follows: Place the elastic flat on the wrong side of the material and sew on with the zigzag stitch. Fold the elastic down once, inside (on the wrong side) and sew finally on the right side with the tricot stitch. The stitching is at the same time stretchable, hard-wearing and very decorative.

60 61 62 63
64 65 66



Decoration — figs. 63, 64



Decoration for table-cloths, fancy finishes on sheets, trimmings on curtains, etc. Possibly reinforce the underside with paper, which will be torn off after the embroidery has been completed. Start with the central design and continue by embroidering alternately to the left and right of the first embroidery.

Decorative Sewing

A little imagination and bit of practice are all you need. It is preferable to use embroidery thread and choose matching colours. Stiffen soft material by placing paper underneath it, before sewing.

Edge of a Napkin — fig. 65



Embroider the edge, placing a woollen thread flat under the foot, in the left groove. Embroider, allowing the needle to stitch off the material to the right, near the edge. Make the stars with the triple zigzag stitch. Make a few trials first, on an extra piece of material. The stems are embroidered with the elastic triple stitch.

Edging Stitch — fig. 60



This edging is obtained by making the needle stitch off the material to the right, close to the edge of the folded material. Tray-cloths, table sets and table-cloths, frills on blouses and around openings can all be given an original touch with this scalloped edge.

Braid — figs. 61, 62

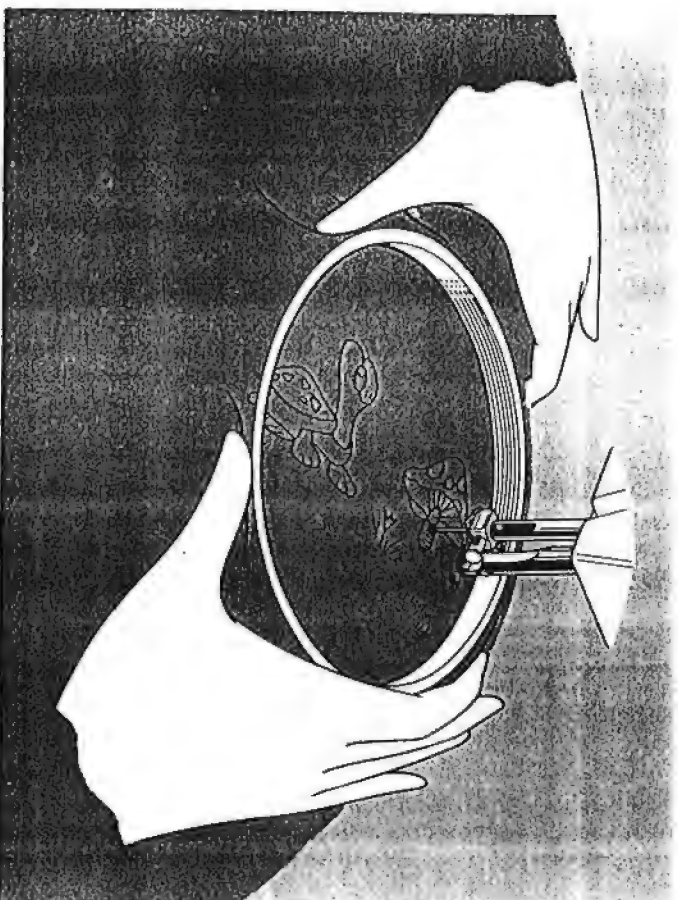


Braid is easy to put on and looks attractive on curtains, cushions or national costume blouses. Baste the braid in place. Embroider with the satin or tricot stitch down the middle and the three-step or triple zigzag along each side.

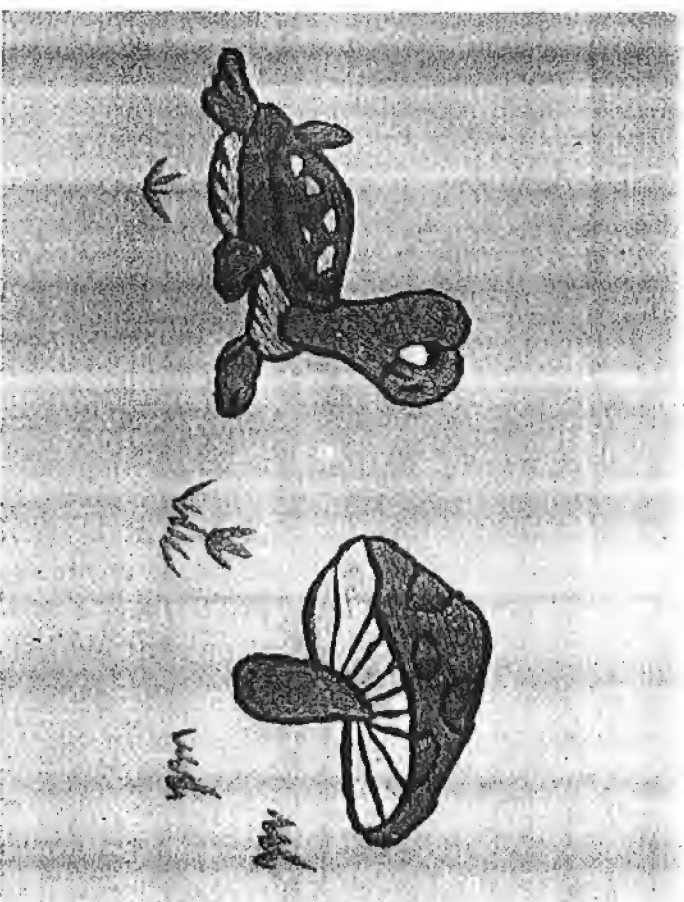
Cross Stitch — fig. 66



The cross stitch is a pretty imitation of the hand embroidery stitch which can be used to enhance place-mats, napkins, and curtains. Transparent, self-adhesive tape can be used as a guideline for straight decorative stitched lines.

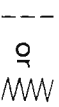




67



68

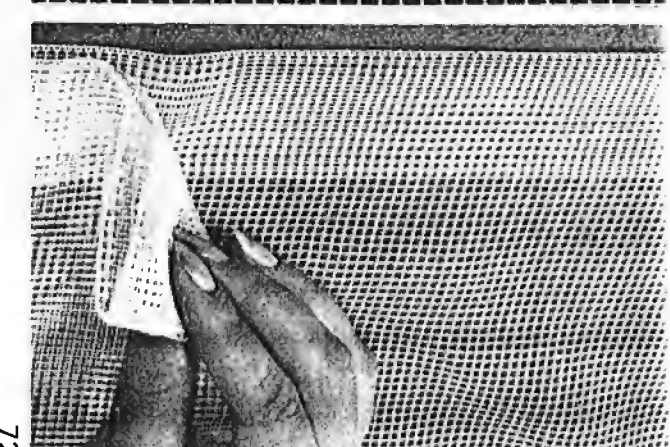
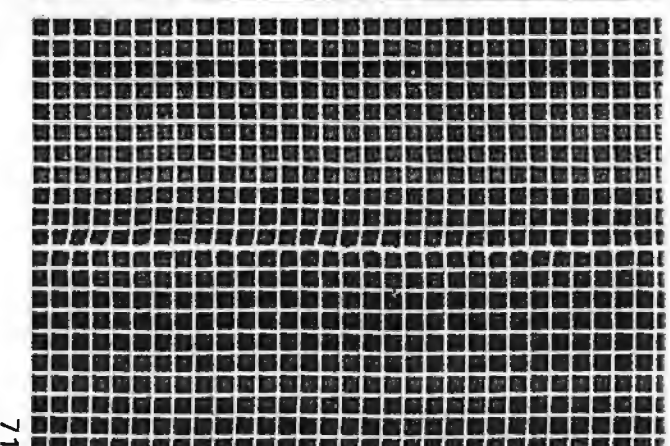
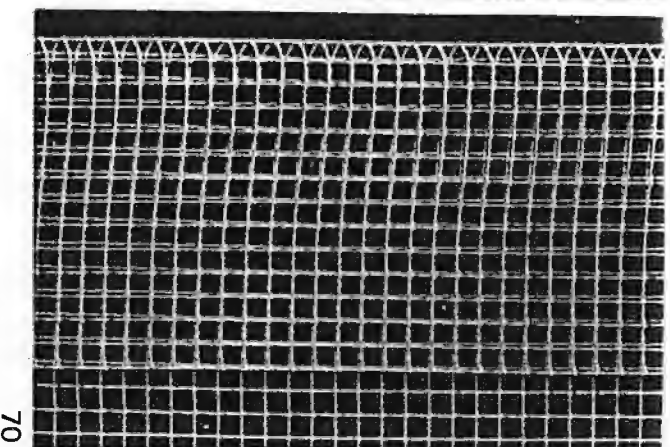
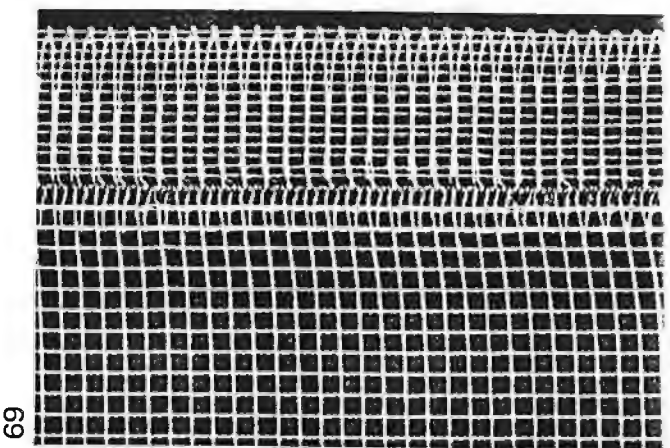
Free-hand Zigzag Embroidery — figs. 67, 68

Feed dog:  or  Pressure: 0  0

The embroidery is done without a sewing foot. Needle no. 70 or 80, fine or medium embroidery thread, matching colours. Transfer the design onto the right side of the material (fig. 67), stretch the material tightly over an embroidery hoop.

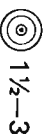
Embroidery

Sew the outline of the design with a straight stitch. Next, embroider with the zigzag stitch (width 5), moving the embroidery hoop by hand from left to right and vice versa, so as to obtain really parallel zigzag seams. Embroider around the whole edge and continue by filling in the design evenly, working towards the centre.



Other Sewing

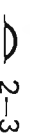
Sewing Net Curtains — figs. 69, 70



The side or bottom hems can always be sewn with straight stitches. Make sure that the meshes of the curtain match (if the pattern allows) — fig. 69 wrong, fig. 70 right.

Pin or baste. Since it is not always easy to follow the straight in some net curtains, it is a good idea to hold the material behind and in front of the foot. If necessary, reduce the upper tension and guide the netting. Straight stitches with a medium stitch length may be used for the hems of the two long sides, but the zigzag stitch is preferable.

Joining Curtains in the Middle — fig. 71



Sew 1 cm (1/2") in from the edge. Then cut flush with the seam. The join will be strong and almost invisible.

Hems — fig. 72



Net curtains are often sold finished off at the bottom with attractive designs and with a lead wire to ensure that they hang well. If this is not the case, make a hem. Fold twice to the full width of the fold (about 15 cm/6"). Sew the hem with a zigzag stitch.

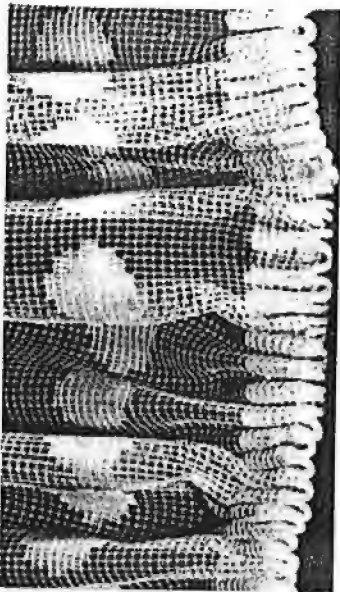
Gathering or Pleating Curtains

Here are three different methods but, of course, there are many more:

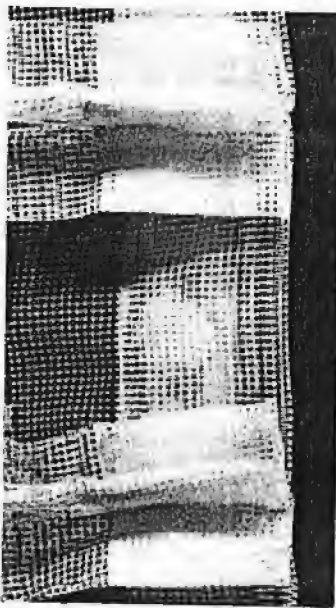
— Figs. 73, 74 **Curtains Gathered with Rufflette Tape.** This is tape which is usually made with loops for hooks and with one or more cords threaded through it. Place the Rufflette at the top edge of the curtain, on the right side. Sew and then fold the Rufflette down flat on the wrong side of the curtain. Sew the second seam. All you have to do now is pull the cords and distribute the gathers as required. The same type of gathering can be used for heavy curtains and pelmets.

— Figs. 75, 76 **Traditional 3-fold "Pinch".** After sewing a hem at the top about 10 cm (4") wide, fold to form attractive, traditional "Pinch" pleats. Sew a few stitches at the base of the hem to keep it in place.

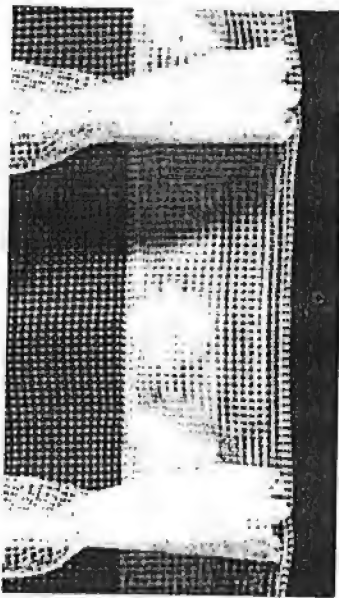
— Figs. 77, 78 **Fluted Pleats.** These make the curtain hang extremely well. Make the hem as described above. Fold as shown in the illustration and sew the pleat in place at the base of the hem.



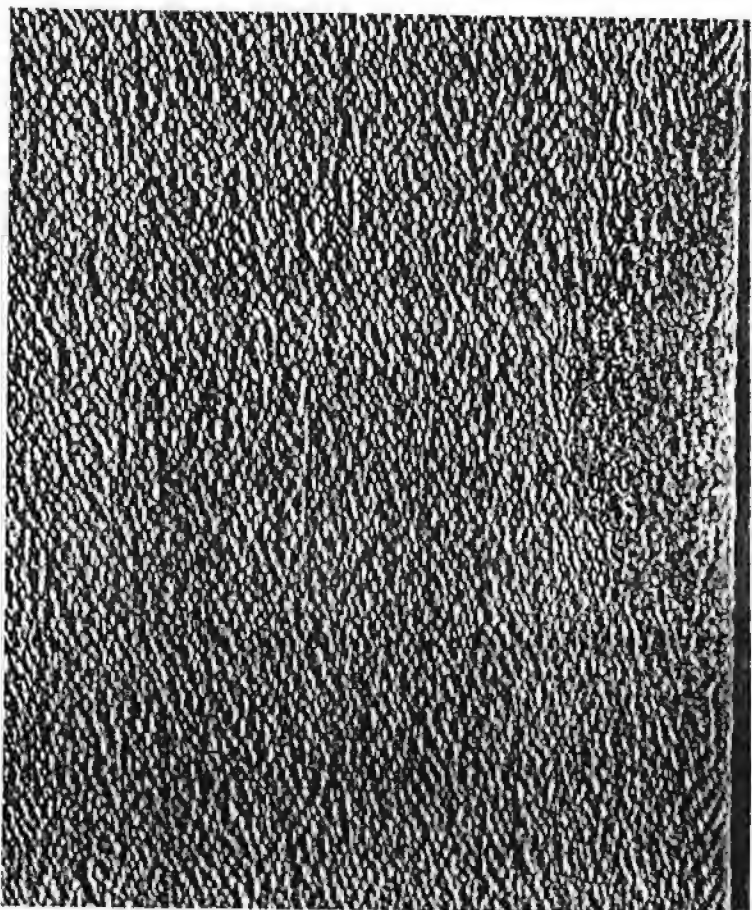
73
74



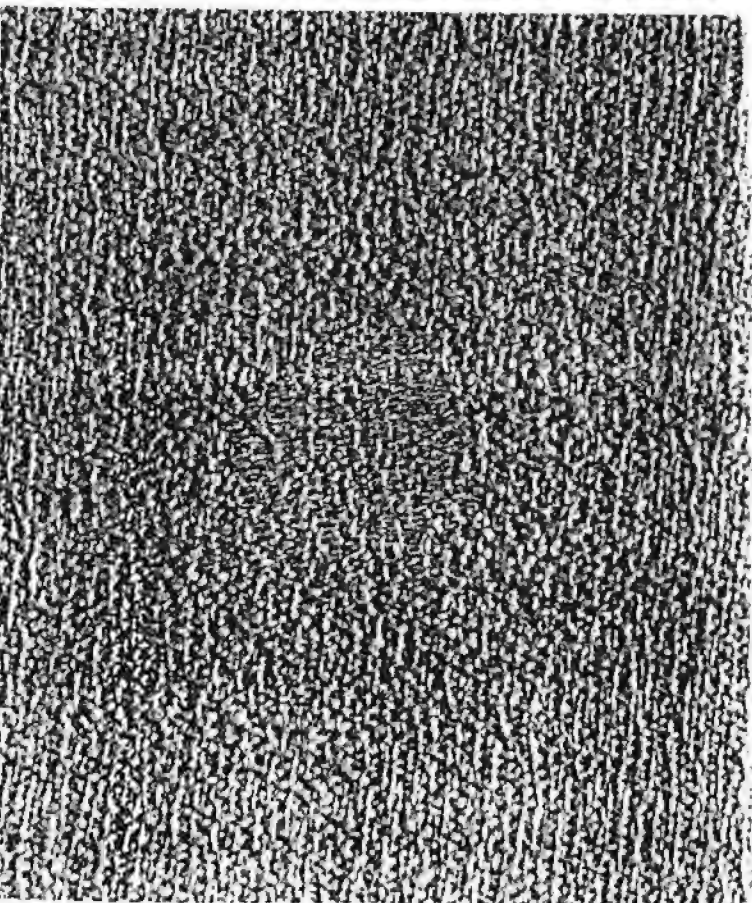
75
76



77
78








79








80

Darning Edges — fig. 79

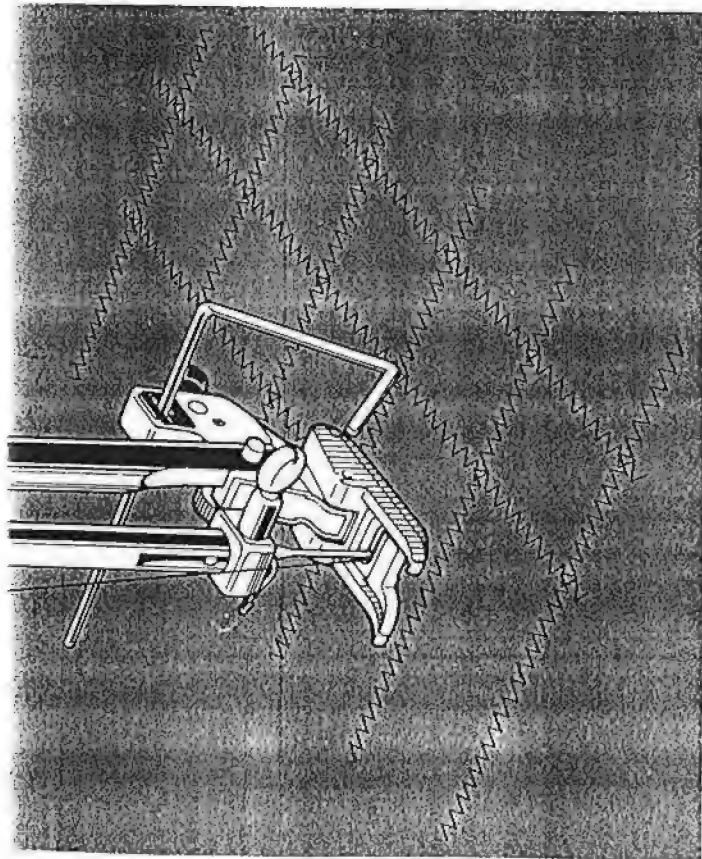
Feed dog:  or  Pressure:  5  0  0

For towels, cloths and apron strings that are worn at the edges. Darn in the normal way (see Instruction Manual, Page 32), but as soon as you reach the edge of the material, sew back quickly, to obtain neater edges.

Darning with Fine Wool — fig. 80

Feed dog:  or  Pressure:  5  0  0

Choose fine wool of the same colour and texture as the garment or article to be darned. Wind it onto the bobbin, place the bobbin in the bobbin case and readjust the lower tension in accordance with the instructions given on page 11. The upper thread should be darning thread of the same colour. Darn and finish off as usual.



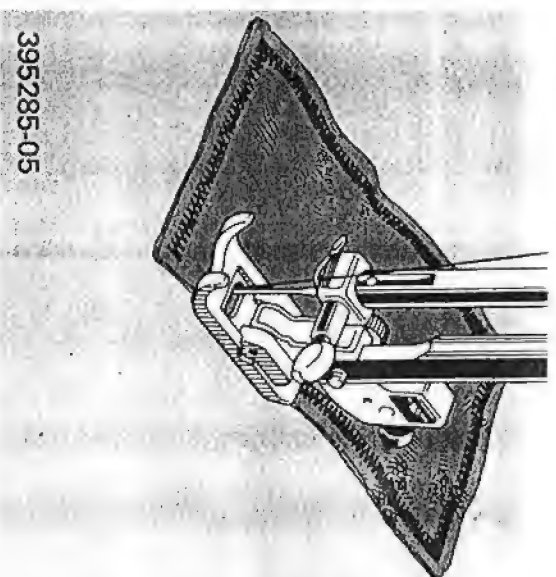
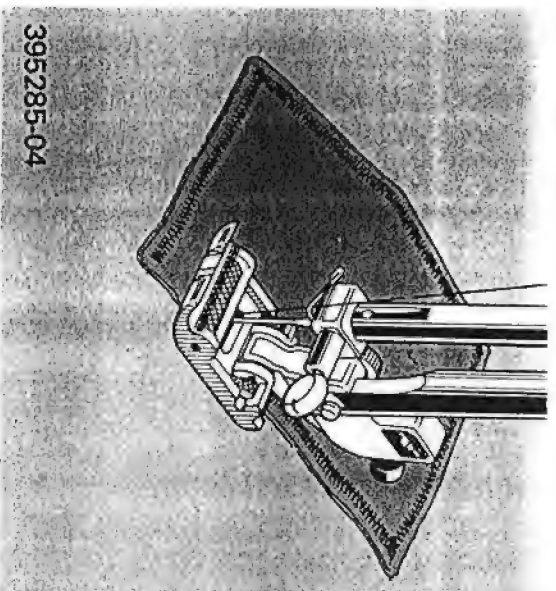
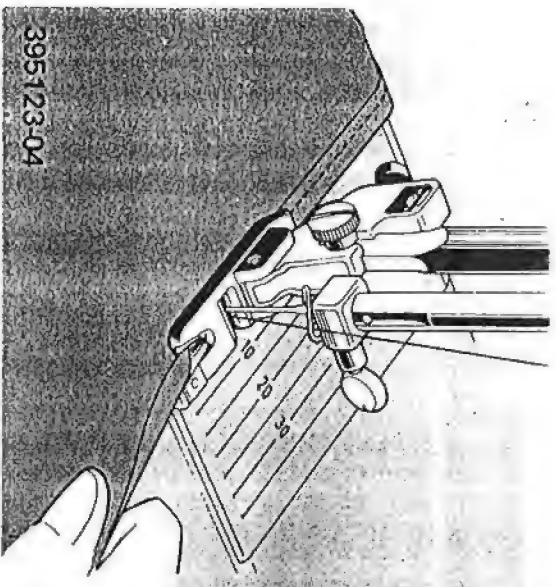
81

Quilting — fig. 81



Fit the quilting guide on the foot shank.

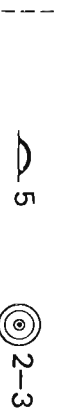
Quilting can be done with the straight stitch or with the zigzag. Adjust the stitch length and stitch width as required. Always start in the centre of the work. Sew the first row of stitches and adjust the guide to the desired distance between the rows. (The guide must not press down on the material, for this would prevent it from being fed correctly). Then sew one line after the other of the quilting, starting from the centre and working out towards the edges. The layers of padding have a tendency to shift during sewing and, once sewing has been completed, it will be necessary to cut the edges even. Therefore, allowance must be made for a little more material.



Sewing with Extra Accessories

If desired, the already wide range of applications for your machine can be extended even further with the use of extra feet that can be purchased from your sewing machine shop. Simply refer to the respective numbers.

Hems



Hemmer foot 3.2mm (1/8") — No. 395 123-04 or

Rolled-hem foot — No. 395 285-07 (not illustrated)

Prepare a hem of the same width as the foot, for example 3.2mm (1/8"), with the material folded twice over a length of 2 to 4 cm (1"—2" approx.). Place it underneath the foot, lower the foot, sew two or three stitches by turning the flywheel by hand, leave the needle in the material and raise the foot. Introduce the fold into the scroll of the hemmer and lower the foot again. Sew, while guiding the material in such a manner that the scroll of the hemmer is always well filled.

Sewing Plastic, such as Vinyl, or Leather

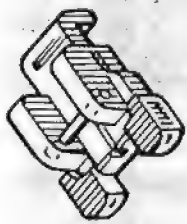
Roller foot — No. 395 285-04

Teflon-coated foot — No. 395 285-05

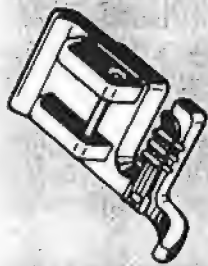
Straight or zigzag stitch, or even the edging or overlock stitch. Some plastic materials may tend to stick to the sole of the foot. These feet avoid friction and plastic materials can thus be sewn without being held back.

Choose the stitch most suitable for the work.

N.B. These feet are also extremely useful for sewing leather and imitation leather. The roller foot may be the best choice for some jersey dress fabrics or synthetic fabrics. In all cases, it is advisable to sew a trial seam first.



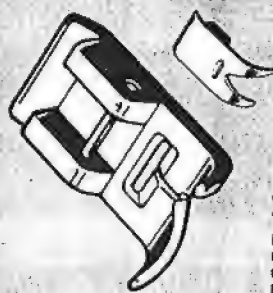
395274-01



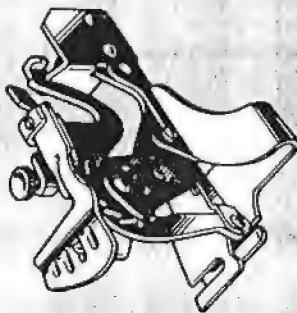
395285-03



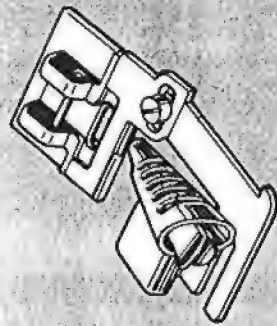
395285-06



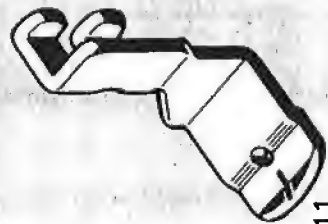
395285-08



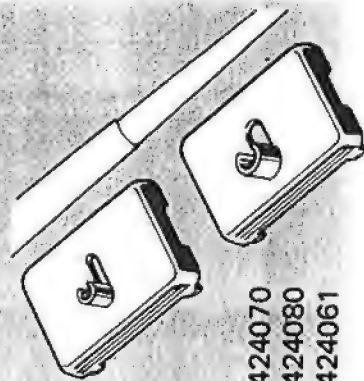
395285-09



395285-10



395285-11



424070
424080
424061

Other Extra Feet and Accessories

Button Foot — No. 395 274-01

For buttons and hooks, curtain rings, etc.

Multiple Cord Foot — No. 395 285-03

As many as three fine cords can be inserted into this foot. By covering them with decorative stitches, very attractive designs can be obtained.

Overcasting foot — No. 395 285-06

For overcasting.

Soft-knit foot — No. 395 285-08

For sewing soft-knits.

Ruffler — No. 395 285-09

Binder — No. 395 285-10

Gathering foot — No. 395 285-11

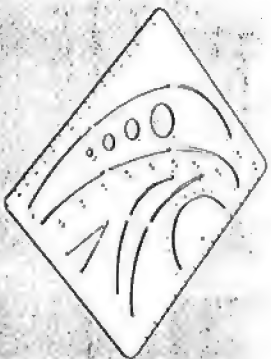
Eyelet Plates

2 mm 1/16" — No. 424 070

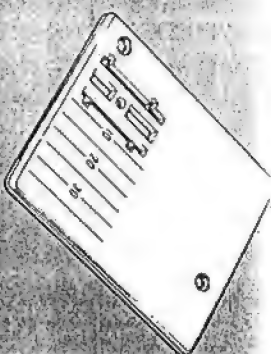
4 mm 1/8" — No. 424 080

Awl — No. 424 061

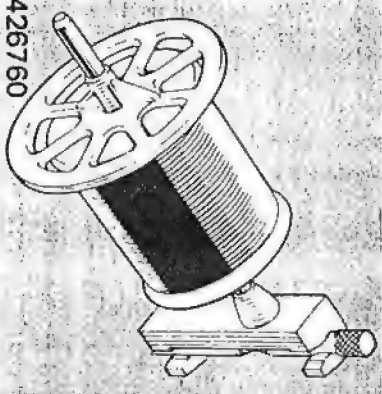
Make it possible to embroider eyelets with a diameter of 2 and 4 mm (1/16 and 1/8"). The awl is used for piercing the material to make the holes.



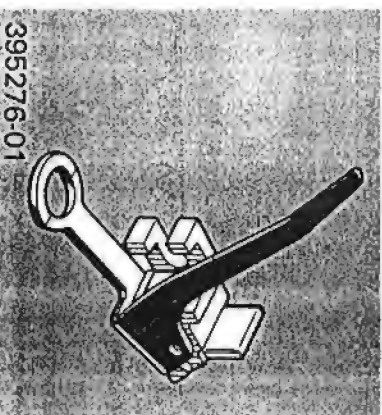
424740



395291-01



426760



395276-01

Sewing stencil — No. 424 740

For drawing and modifying patterns, guide marks, practical and decorative designs.

Needle plate with a Round Hole — No. 395 291-01

For straight sewing on special fabrics.

Horizontal spool pin — No. 426 760

Useful for very slippery threads that have a tendency to unwind too easily.

Darning foot — No. 395 276-01

Not illustrated

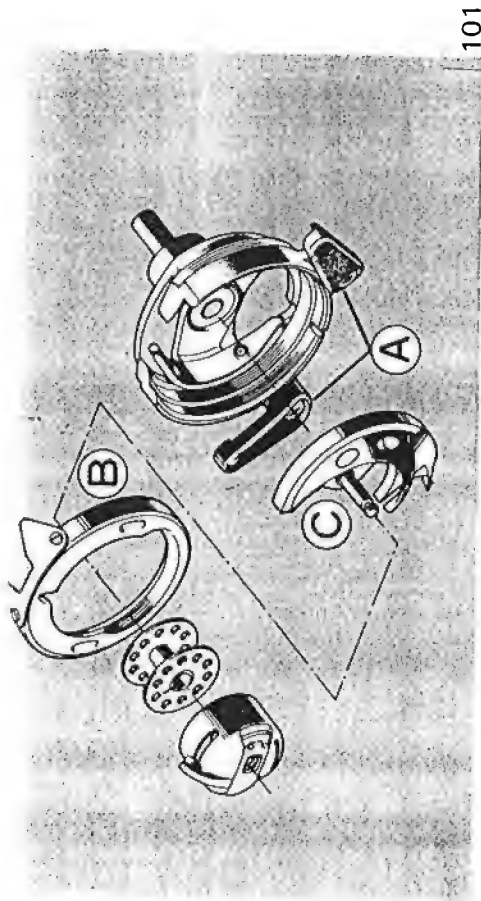
Embroidery hoops 60 mm — No. 424 970

and 138 mm — No. 424 980

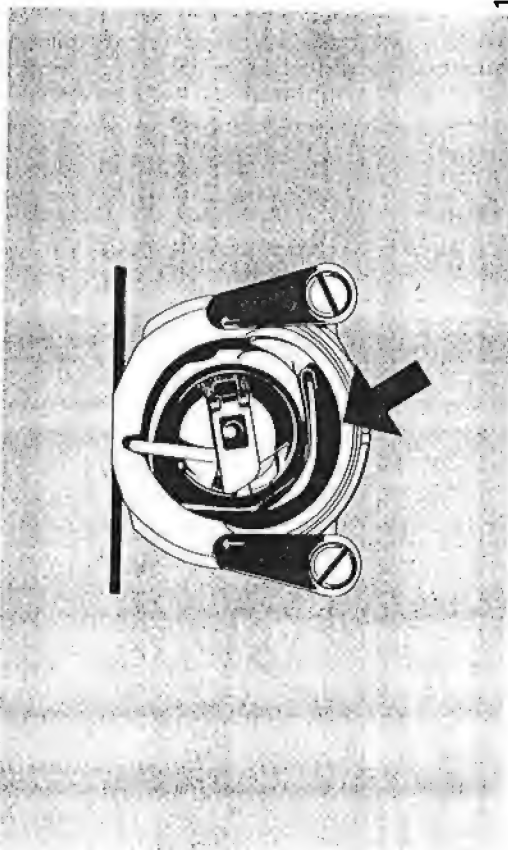
Dust brush — No. 426 111

3 mm Twin Needle size 90 — No. 395 118-00

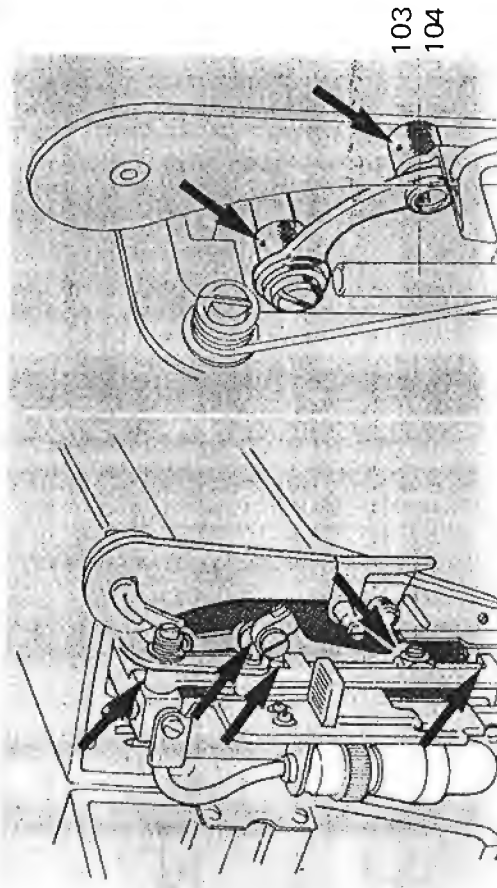
For sewing piping, decorative designs, etc.



101



102



103
104

Maintenance

Your machine will always serve you faithfully if it is cared for properly.

Disconnect the machine according to the "Safety" recommendations on page 3.

— Turn the flywheel until the needle reaches its highest position. Open the shuttle race cover, and remove the bobbin case.

— Brush the feed dog and the area around it.

101 Turn the two race cover clamps (A) outwards and remove the race cover (B) and the hook body (C).

Clean the shuttle race and the hook, as well as the race cover. Replace the hook body, the race cover, and lock into position with the race cover clamps, making sure that the clamps have snapped securely into place and turn the flywheel one turn, by hand.

102 Place a single drop of oil on the hook body (see arrow).

103–104 From time to time, oil the points under the front cover, as shown in fig. 103 and 104. This will ensure that the machine runs smoothly. Wipe off excess oil.

Sewing Light Bulb

Maximum input of the lamp 15 w. Remember this, should it have to be changed. The input of the lamp is also shown on the switch plate of the machine and on the front cover.

103 To replace the bulb: first of all, **disconnect** your sewing machine from the mains. Open the front cover and unscrew the bulb. Replace the bulb by following the same procedure in the reverse order.

To close your machine

— Remove the upper thread, push down the spool pin and place a piece of cloth under the sewing foot.

— Turn the flywheel by hand until the **thread take-up lever** is in its **lowest position**. Put the sewing table/accessory box in place on the base plate and the foot control on top. Put the cover over the machine.

N.B. Adjustment of the driving belt — The driving belt is set in the factory and requires no further adjustment by the user.

To remedy minor disorders		Pages
consult the instruction manual on the pages indicated, if:		
The upper thread breaks		
– Needle not of the system 130/705H (15 x 1), of poor quality, bent, not inserted correctly	5	
– Needle not suitable for the kind of work	33	
– Incorrect threading or thread of poor quality	8–9	
– Lower thread not drawn up properly	10, 11	
– Size of thread not suitable for the kind of work	33	
– Machine needs cleaning	63	
– Upper tension too tight	11, 35	
The lower thread breaks		
– Thread not wound evenly on the bobbin or not drawn up correctly	6–11	
– Lower tension too tight	11, 35	
The machine skips stitches		
– Sewing foot not suitable for the kind of work	34	
– Machine not threaded correctly	6–11	
– Needle not of the system 130/705H (15 x 1), is the wrong way round, incorrectly inserted	5	
– Needle not suitable for the kind of work	33	
– Thread too coarse for the size of needle or not flexible enough	5, 33	
– Lower thread not drawn up correctly	10–11	
The thread knots beneath the material		
– The upper tension has not been threaded correctly. Repeat the threading operation	8–9	
The material puckers		
– Sewing foot not suitable for the kind of work	34	
– Thread too thick	33	
– Stitch too long	33	
– Upper and/or lower thread tensions too tight	11, 35	
– Lower thread not drawn up correctly	10–11	
The material is fed unevenly		
– Needle plate not fitted properly		
– Sewing foot not lowered or not attached securely	4–5	
– Sewing foot not suitable for the kind of work	34	
– Stitch length not suitable for job	34	
– Stitch length (for superautomatic stitches) not set at “S” red	24–29, 34	
– Foot pressure not suitable for the kind of work	15	
– Dirty feed dog	5	
It is not possible to obtain the stitch desired		
– Stitches in the green zone: stitch length dial should be set between ½ and 4	18–23	
– Stitches in the red zone: stitch length dial should be set at “S” red, in the notch	24–29, 34	
– Increase stitch width	12–13	
– Feed dog has dropped down	14–15	

	Pages
The needle breaks	
– Foot and needle plate not fitted properly.	4–5
– By pulling the material, the needle strikes the foot or the needle plate.	
– Needle too fine for the material and the thread.	33
– Needle not of the system 130/705H (15 x 1), of poor quality, bent, not inserted properly.	5
– Needle not suitable for the kind of work.	33
– Upper tension too tight	11, 35
The machine runs too slowly	
– Tighten the flywheel coupling knob	6–7
– Disconnect and reconnect the foot control	4–5
– Clean and oil.	63
– Put a drop of oil in the shuttle race.	6–7, 63
The machine is noisy	
– Shuttle race has not been oiled or is dirty	6–7, 63
– Needle is blunt	
The motor runs but the machine does not	
– Tighten the flywheel coupling knob	6–7
The bobbin winder runs but the machine does not	
– Tighten the flywheel coupling knob	6–7
The machine will not run	
– Check power supply	
– Switch on the safety switch	4–5
Remains of thread or lint in the shuttle race:	
• Remove needle, bobbin case and needle plate.	
• Open the race over clamps outwards, remove the race cover and the shuttle hook, and clean out the thread	63
• Replace the shuttle hook and the race cover, and lock with the race cover clamps. Oil the shuttle race and run the machine without thread for a few seconds.	63
The buttonhole is not sewn correctly	
– Wrong foot and stitch length too short.	30–31

Alphabetical Index

Accessories 4–5, 60–62
 Accessory case 2, 4–5
 Appliqué work 45, 47
 Bobbin 6–7
 Bobbin case 6–7
 Braid 52–53
 Buttonholes 30–31, 46
 Buttons 46
 Centering the needle 16–17
 Cleaning 63
 Closing the machine 63
 Converting to free arm 4–5
 Curtains 56–57
 Darning 32, 58
 Decentering the needle 16–17
 Decorative edges 45, 48, 52–53
 Decorative sewing 45–54
 Disengaging the flywheel 6–7
 Disorders 63–65
 Edges (embroidering) 45, 48, 50, 52–53
 Edges (worn) 58
 Edge-to-edge sewing 38–39
 Elastic 40, 51
 Electricity 2–5, 63
 Embroidery 54

Fabrics 33
 Feet 4–5, 60–62
 Feed dog height 14–15
 Flywheel 2–3, 6–7
 Foot control and cord 2–5
 Free arm 2–5
 Fringed edges 45
 Gathering 37
 Grogram 51
 Hems 41, 47–48, 60
 Hems in Jersey 38–39, 41, 47–48, 50
 Instant darning 38–39
 Jersey (sewing of) and knitwear 38–39, 50
 Lace 42–43
 Light 2–3, 5, 63
 Light bulb 5, 63
 Lubrication 6–7
 Main parts 2–5
 Main switch 2–5
 Maintenance 6–7, 63
 Monograms 44, 47
 Needles 4–5, 33
 Net curtains 56–57
 Oiling 6–7, 63
 Operation 4–5
 Overcasting 38–39, 48

Patching	38-39, 47	
Patching cotton or another fabric	38-39	
Patching jersey	38-39	
Pressure control for foot	14-15	
Quilting	59	
Reinforcing	47	
Safety	2-3, 63	
Satin stitch	18-19, 44	
Selecting stitches	2-3, 12-13	Selector
* straight stitch	16-17, 36-37	Servicing
* zigzag	18-19, 38-39, 44-46	Sewing on elastic
* elastic blind stitch	20-21, 41	Sewing table
* three-step zigzag	20-21, 38-39	Special feet
* shell edging stitch	20-21, 41	Stitches (see selecting stitches)
* triple zigzag	24-25, 47	Stitch length
* elastic edging stitch	26-27, 48-49, 52-53	Stitch length dial
* tricot stitch	26-27, 48-53	Stitch width
* elastic triple seam	24-25, 47	Stitch width wheel
* stitch-and-overcast	26-27, 48	Stretch (fabrics)
(Model 450 only **)		Tapered satin stitch
** interlock stitch	22-23, 43	Thicknesses
** checker stitch	22-23, 52-53	Threading
** domino stitch	22-23, 52-53	Threads
** scallop	22-23, 41	Thread take-up lever
** blind stitch	22-23, 41	Thread tensions
** overlock	28-29, 42-43, 48-49	Upper tension
** cross stitch	28-29, 52-53	Upper tension knob
** crown stitch	28-29, 52-53	Voltage
** decorative stitch	28-29, 52-53	Zip fasteners
** stretch overlock	28-29, 48, 52-53	

All rights reserved to make alterations to the Sewing Machine
and accessories or to change any of the specifications described
in this booklet.

Anglais — No. 395 342-41

TAVARO S.A., GENEVA — SWITZERLAND

